C0175-3-F

American Banker
SPECIAL REPORT

MANAGING ... 1987 TECHNOLOGY

THE PEOPLE
THE SYSTEMS
THE FUTURE

American Banker's First
Technology Survey

$65 MILLION THAT OUR BANK SOFTWARE IS BETTER THAN OUR COMPETITION'S.

There continues to be a lot of empty talk about big budgets for software development. Not from Systematics. For 19 consecutive years, Systematics has committed a large share of its revenues to bank software research and development.

No other company has committed or will commit as many dollars year after year to the development of banking software as Systematics. In the next 5 years, we will spend more than $65 million to create new systems and, as always, regularly enhance our existing programs.

More than 225 analysts—bank analysts—research and write software daily. Because we use our own software in 50 data centers across the country, it has to be good and it has to be up-to-date. More than 700 banks and savings institutions depend on that software to get the work out every day.

We are America's largest and most consistent investor in banking software. The fact that our software is the best available today and for the future is not by chance. It's a sure thing.

Systematics
THE ONE SOURCE.

To get a closer look at banking's most proven software, call (501) 223-5250
or write Systematics Marketing, 4001 Rodney Parham Road, Little Rock, AR 72212.

Dear Reader

Coverage of how technological developments affect the banking industry has long been a very high priority for *American Banker.* It is, after all, the creative use of machines and software by people that has enabled financial institutions to revolutionize the way they serve their customers, and to compete more effectively in an increasingly fierce marketplace.

Our newspaper wanted to learn more about how you, our readers, are managing technology; we wanted to know more about the data processing and operations people you manage, the systems you use, and how you perceive the future. So early this year, for the first time, we commissioned a national survey to learn what is on the minds of the senior operations executives of our nation's banking and thrift institutions.

After lots of coffee and creative brainstorming with our three reporters who cover the tech beat full time — Jeffrey Kutler, David Tyson, and Yvette Kantrow — and with help from James Moore and Howard Lax of Trans Data Corp., a research affiliate of the *American Banker,* our first technology survey emerged. During June and July Trans Data called senior operations officers from 344 financial institutions with $250 million deposits or more — 187 commercial banks and 157 thrifts — and asked them a wide range of questions. (A copy of our questionnaire appears on page 72.)

We hope that while reading this special report on technology, you will be impressed by our findings about how people in operations view their jobs, about how satisfied they are with their computer and software vendors, and on what they see as future opportunities and problems. We also asked survey participants for their views on what they regard as the biggest successes and failures of technology.

Our goal in all of this is to try to provide information to help you perform better — information to operations people to compare notes with their peers, and to vendor suppliers to help them take their customers' pulse and hear what's worrying them. In the *American Banker*'s opinion, only by such sharing of information and opinions through surveys like this one can the banking industry continue to make progress in serving its customers more effectively and efficiently.

We hope, too, that after reading our special report you will take a minute or two to complete the reader questionnaire on page 89 to offer us your perception of how useful this first *American Banker* technology survey is. We want to do others in the future that will provide you with information relevant to the issues and problems that are on your mind. In order to grow and learn with you, we need your feedback on how well we are doing.

Here's to good reading!

Respectfully,

William Zimmerman

William Zimmerman
Editor

TABLE OF CONTENTS

How the Survey Was Conducted

The American Banker's first survey on technology management is based on interviews with senior executives responsible for operations and technology at 344 banks and thrift institutions in the United States. This group consisted of 187 commercial banks and 157 thrift institutions, chosen as a representative sample of the total population of about 1,800 depository institutions with $250 million or more in deposits.

Trans Data Corp., Salisbury, Md., a research affiliate of this newspaper, developed the survey questionnaire in collaboration with the American Banker's senior editors. Trans Data conducted the interviews, tabulated the responses, and assisted in the preliminary analysis that led to this publication.

The interviews with senior operations executives were conducted by telephone during June and July 1987. The questions — covering general management, personnel issues, vendor evaluations, and future trends — typically required about 20 minutes to answer.

The statistical reliability of the results varies according to the number of responses to a particular question. For a question in which half of all 344 survey participants give the same response, there is an 80% probability that the same answer would be given by 47% to 53% of all financial institutions of similar size.

In other words, the sampling error at the 80% confidence level is no greater than plus or minus three percentage points.

For smaller groups within the total sample, the margin of error widens. For questions answered by all 187 commercial banks, it is plus or minus four percentage points; for questions answered by all 157 thrift institutions, it is plus or minus five percentage points. Subgroups of smaller size have greater margins of error.

Managing TECHNOLOGY

Editor-in-chief: William Zimmerman
Staff technology writers: Jeffrey Kutler, David O. Tyson, Yvette D. Kantrow
Special projects coordinator: Susan A. Festa
Design director: Stanford Kay
Chartist: Teresa Berasi, Paragraphics
Copy editors: Jane Sandiford, Robert P. Molay
Production: Joseph Champey, Daniel H. Cowles

Cover art: Andy Christie

OVERVIEW By Jeffrey Kutler

5

The Fast Track

Operations Gains New Luster As a Profit Center for Banks

THE PEOPLE By Jeffrey Kutler

10

Managers Scramble to Keep Professionals Happy

Offering more than money can keep workers from defecting to a rival.

22

Research and Development Is Gaining Momentum as Banks Look to the Future

The desire for a competitive edge is prompting managers to budget for creativity.

THE THRIFTS By Jeffrey Kutler

26

Thrifts Are Playing Catch-up with Big Operations Budgets

They are devoting a larger portion of the pie to technology than banks.

THE SYSTEMS By David O. Tyson

34

Large Institutions Pick IBM As Best Hardware Provider

Rivals Unisys and NCR get lower grades in all categories.

40

Bankers Rate Their Software Good, but Not Great

M&I Marshall & Ilsley get the best marks, with IBM coming in second.

44

Sales Representatives Get Straight Cs from Their Bank Clients

Those who get good grades get them for knowing their product line well.

THE FUTURE By Yvette D. Kantrow

50

Bankers Resist Siren Call of Sexy New Technologies

Only those systems that have proven practical advantage are being adopted.

56

Can Debit and Credit Coexist on One Card?

Mobil Oil says yes, but the answer is not that clear-cut for bankers.

Robert P. Maisy

Editor-in-chief Bill Zimmerman (standing) with technology writers (from left) Yvette D. Kantrow, Jeffrey Kutler, and David O. Tyson

60

Smart Cards Are a Gray Area for Many Bankers

The technology is not well understood, and there is the added problem of cost.

64

Machines Won't Displace People in Banks of the Future

Technologies such as interactive video are supplementing, not supplanting, workers.

68

It's People, Not Machines, That Cause the Big Glitches

Communication between users and vendors is the key to a smooth-running system.

WITHOUT DATA GENERAL, INTEGRATING YOUR OPERATIONS IS LIKE MIXING CENTS AND PENCE.

DATA GENERAL GIVES BANKS THE MOST INTEGRATED COMPUTER SOLUTIONS.

Converting foreign currencies isn't a bank's only problem. You need to link different computers. Provide new customer services. And move toward a global 24-hour banking day.

In this competitive arena, banks need to solve these problems and enhance their bottom line.

Which is why Data General has formed alliances with a variety of companies. Including Citicorp and National Investor Data Services.

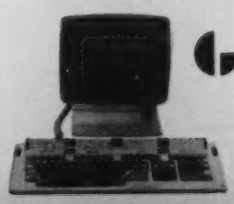
We're compatible with IBM. And we offer you industry communication standards. Like Ethernet® and X.25.

Put our leading CEO® office system at your fingertips. For faster customer service. Increased productivity. And the most integrated computer solutions.

Half of all money center banks, top international banks and many regional banks profit from our systems.

Our solutions give you quality and value. Dollar for dollar. Or, pound for pound.

To find out more, call: 1-800-DATAGEN.



Data General
a Generation ahead.

©1987 Data General Corporation, 4400 Computer Drive, MS C-228, Westboro, MA 01580. CEO is a registered trademark of Data General. Ethernet is a registered trademark of Xerox Corporation.

The Fast Track

Operations Gains New Luster As a Profit Center for Banks

Operations departments, those behind-the-scenes factories long relegated to doing banking's grunt work, are emerging into the limelight as contributors to profitability and participants in setting the industry's future course.

But because of its increasing technology component, operations remains a puzzlement to many top banking executives who are steeped in an earlier tradition that prized genteel manner more than speed, and placed more faith in handshakes than in electronic blips.

This clash of old and new values is being managed better by some institutions than others. An *American Banker* survey of senior operations executives shows that most of them have won full membership in the executive suite alongside lenders, retail bankers, trust bankers, and financial officers.

Some operations managers remain on the periphery of the banking mainstream, frustrated with limited opportunities for advancement and with chief executives' reluctance to loosen the purse strings for technology.

But on the whole, the survey shows that operations managers are grappling with increasingly complex problems that go to the heart of their banks' profitability. They also feel personally and professionally rewarded for facing the challenges.

These conclusions emerge from a telephone survey

The managers in charge of back offices are making their way to executive suites

BY JEFFREY KUTLER

conducted for the *American Banker* in June and July 1987 by Trans Data Corp., Salisbury, Md., a research affiliate of this newspaper. Trans Data interviewed senior operations managers from 344 financial institutions — 187 commercial banks and 157 thrifts — with $250 million or more in deposits. These are the institutions most likely to run their own operations rather than farming them out to service companies.

The survey is the first of its kind to delve into executives' attitudes about three major aspects of operations and technology in the nation's banks: organizational structure and personnel; satisfaction with computer and software vendors; and future opportunities and trends.

Among the salient results, which are examined in greater detail in the following pages of this special report, are the following:

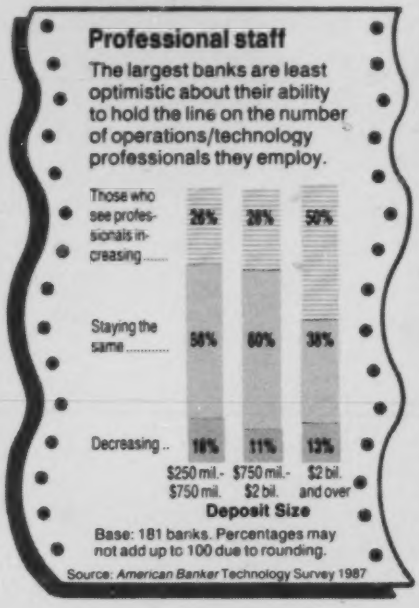
• Cost containment in the back office is a continuing problem, but bankers are doing better at it than before and are optimistic about future reductions in staff, if

Jeffrey Kutler is an American Banker *reporter in New York.*

not about total systems expenses.

- Bankers are more satisfied with the products and services of International Business Machines Corp. than with those of its closest rivals in the mainframe computer business, Unisys Corp. and NCR Corp.
- Operations executives track new technologies closely but are generally pessimistic about the near-term prospects of such highly touted developments as smart cards, total branch automation, biometric security, and home banking.
- Commercial banks budget in equal proportions for systems and for people, reflecting a heightened concern about recruiting, training, and retaining skilled computer professionals in a competitive job market.
- Thrifts devote more of their operations budgets to systems than to people, indicating that sizable savings institutions are building for the future by bringing their data processing systems in-house.

Banks: Expectations of Change



Some Differences by Size

Banks and thrifts with more than $250 million in deposits are similar in their approaches to many organizational and personnel policies. Differences are most evident at commercial banks with more than $2 billion in deposits. They reflect the greater scope and sophistication — and perhaps bureaucracy — that would be expected in larger-scale back offices.

Regardless of the size or type of financial institution, operations management has risen in prestige as a senior-level function. Sixty percent of those in charge of operations hold the title of senior vice president, executive vice president, or senior executive vice president. In about the same percentage of cases, the chief operations executive reports to a chairman or president.

Also consistent across banks and thrifts of all sizes is the proportion of full-time-equivalent employees who work in operations and technology. It averages about 1 in 5, or 19%, in the commercial bank community. At thrifts the average is 15%, or close to 1 in 7.

Operations and technology spending for 1987 at the average bank in the survey is $15.2 million, but this figure is distorted by 40 banks with over $2 billion in deposits, which average $55.3 million. Banks in the range of $750 million to $2 billion report a $6.7 million budget; banks between $250 million and $750 million average $2 million in spending.

The average thrift's operations and technology expenditure in 1987 is $3.5 million. The largest thrift institutions, with $2 billion or more in deposits, average $7.5 million, which puts them closer to medium-size commercial banks than to large banks.

Two-thirds of the commercial banks say their 1987 spending figures for operations are higher than in 1986, and 18% say they are lower. Another 11% report no change, and 7% give no answer. (Percentages do not add up to 100 due to rounding.) Bankers anticipate similar figures for 1988: 67% say operations expenditures will rise, 12% foresee a decline, 18% expect no change, and 9% give no answer.

At 121 banks that anticipate higher costs in 1988, the average expected increase is 9%.

The biggest commercial banks are less optimistic than others that they can hold the line on staff levels and on total technology expenditures. Half of the $2 billion-and-over group see staff levels increasing in years to come, while only 27% of other banks and 36% of thrifts foresee these increases.

Likewise, 73% of respondents at the biggest banks say their total technology spending will rise in 1988, compared with 65% at banks under $2 billion.

Both salaries and total costs have been rising faster than the general rate of inflation in recent years. Growth in operations budgets now seems to be slowing, to the 7%-to-9% range on average. (Operations costs will rise 9% at the majority of banks that expect such inflation. The expected increase is only 7% for the composite of 175 banks and thrifts providing usable answers to the survey questions about current costs and future increases or decreases.)

This is greater than the current 4% to 5% annual rate of increase in the consumer price index, but far less than the double-digit increases that banks experienced in the early 1980s.

These findings from the *American Banker*/Trans Data first annual survey of technology come on the heels of two other studies released in 1987 that ex-

VOICE OF THE BANKER

"TO RUN THE BANK WITHOUT THE TECHNOLOGY THAT IS AVAILABLE WOULD REQUIRE TENFOLD THE NUMBER OF PERSONNEL CURRENTLY USED. WE COULDN'T SERVE THE PUBLIC WITHOUT TECHNOLOGY."

— Vice president of management information systems at Georgia bank

plore the effectiveness of technology management in banks. Those studies, by McKinsey & Co. and Furash & Co., focused on the chief executive officers who are ultimately responsible for operations and technology budgeting.

Rises in noninterest expenses, both inside and outside the operations department, have become the bane of top managers who concurrently witnessed a shrinkage in more traditional banking profit margins, such as loan spreads. The tendency of this trend to split the industry into protechnology and antitechnology camps is the subject of both the McKinsey and the Furash reports.

Many chief executives, who come from commercial lending backgrounds, have been disappointed to conclude that operations exacerbates rather than solves the noninterest expense problem. As a result, some operations executives have been put on tighter leashes, unable to convince chief executives of the returns that greater technology investments may yield.

Furash & Co., a Washington-based management consulting firm, surveyed chief executives of banks and other financial services companies and concluded that 60% of them are suspicious of technology, while the remaining 40% are enamored of it.

Furash dubbed the majority "technophobes," whose attitudes might hinder the development and acceptance of advanced systems that will be essential for success in an increasingly competitive industry.

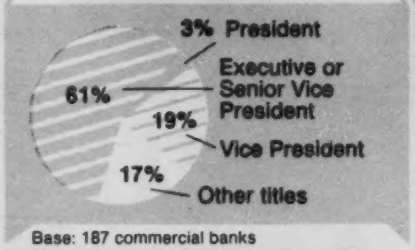
Furash also said that the technophobe proportion is down from 80% earlier in the decade, suggesting that a new generation of "technophiles" is moving into top executive positions.

In the view of consultants at McKinsey & Co., New York, the schism is between "technology haves and have-nots." Working under a commission from Salomon Brothers Inc., McKinsey concluded that exploitation of technology is widening the gulf between the prosperous big banks and the smaller have-nots. This only worsens the decline in profitability at small banks relative to the major regional, superregional, and money center institutions that have technological resources to spare.

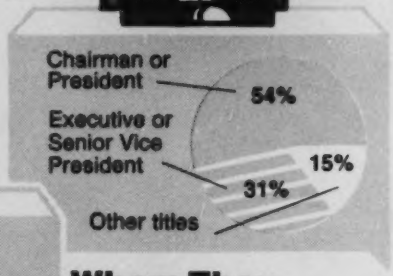
McKinsey estimated that, in 1990, the entire banking industry will spend $17 billion on systems technology. Of the total, 15% will come from Citicorp alone and 40% from only seven major holding companies that McKinsey calls "superplayers" — Citicorp along with Bank-

Banks: Who Manages Operations

Six in ten of the senior bank officers most responsible for operations are either executive vice presidents or senior vice presidents.



Base: 187 commercial banks
Source: *American Banker* Technology Survey 1987



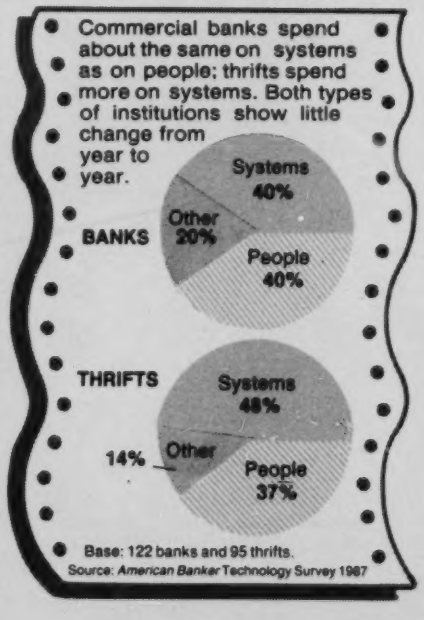
Whom They Report To

Most of the top operations officers report directly to their chairman or president.

America Corp., Chase Manhattan Corp., Manufacturers Hanover Corp., Chemical New York Corp., Security Pacific Corp., and First Interstate Bancorp.

Technology laggards, McKinsey warns, will be unable to gain competitive advantages "that did not exist during the preelectronic, highly fragmented, regulated era. Electronic technologies not only reduce costs by 10% to 30% over manual or paper technologies, but they also provide greater economies of scale and bar other institutions from entering particular business segments."

Systems vs. People


Commercial banks spend about the same on systems as on people; thrifts spend more on systems. Both types of institutions show little change from year to year.
BANKS
Systems 40%
Other 20%
People 40%
THRIFTS
Systems 48%
14%
Other
People 37%

Base: 122 banks and 95 thrifts.
Source: *American Banker* Technology Survey 1987

Status Is Changing

The *American Banker* survey and follow-up interviews with bankers and other observers suggest that the status of technology in banking may have been on the rise earlier this year, even as Furash and McKinsey were taking their controversial snapshots of an industry undergoing rapid change.

Veteran bank operations managers tend to agree that technology issues, given short shrift by chief executives of an earlier era, are no longer belittled — at least at the more astutely managed institutions. Computer-based services ranging from automated teller networks to corporate cash management systems generate much-needed fee income that would not be possible without the support of back-office operations.

"It is true that a majority of the managers of bank holding companies still look upon operations as a necessary evil, but no longer do you find this attitude at the most most profitable organizations," says Henry W. Hobson 3d, senior vice president of Central Bancorp., Cincinnati, and executive vice president of its lead bank, Central Trust Co.

"At the most profitable institutions,

senior managers regard operations as a profit center," Mr. Hobson says. "They see fee-income opportunities arising out of the systems that operations has put in place. On both the retail and commercial side, these systems help us build customer relationships and measure their profitability.

"Data base tools and MIS [management information systems] are becoming more mature and easier to use at all levels of the organization, and this is beginning to have an impact on how we operate and on the profits we make," he adds.

Central Trust is a major provider of automated-teller-machine and point-of-sale network systems. Mr. Hobson points out that these fees derives from computer systems generate "a tremendous amount of fee income" that attracts the attention of top management and garners support for further technological efforts.

Still, one-fourth of operations bankers responding to the *American Banker* survey complain that their top managements are unwilling to spend the necessary money on technology. On the other hand, it may be a sign of real progress that three-fourths do not cite this as a major problem.

Asked about the potential for advancement from operations into senior management positions, 49% of bank and thrift executives say operations people have less opportunity to move up than people in other departments. Another 11% say operations officers have an advantage over others, while 40% perceive no difference.

Becoming Entrepreneurs

There is no better cure than favorable bottom-line results for the bad rap that operations may have taken from top banking executives in years past.

Security Pacific Corp., Los Angeles — one of McKinsey's seven superplayers — reinforces its commitment to operations by providing a seat on its board for John P. Singleton, head of its automation subsidiary, as a vice chairman of the holding company.

Mr. Singleton has won friends in the bank, dispelling the notion that operations is a drain on more traditional profit centers, by distributing the earnings of Security Pacific Automation Co. to other line divisions.

"Two years ago, when we sold some equipment, we took the check and split it up between two departments that used the equipment. We never book our own profits. We turn them back to our users — departments of the corporation — as dividends," Mr. Singleton explains.

Midway National Bank of St. Paul, with only $200 million in deposits, became a major force in the 1970s in the development of electronic funds transfer networks in Minnesota after it installed automated teller machines in convenience stores. The ATM business has yielded substantial fee income to a bank that has only 4,000 card-carrying retail customers of its own.

"Management has been behind this strategy 100%," says Truman Porter, a Midland Bank vice president who convinced his chief executive officer to give ATM operations a try. "When it is no longer successful, we'll stop."

This mix of entrepreneurship with technology seems better suited to Silicon Valley than to any banking company, with the possible exception of Citicorp, which builds and market-tests its own technology. In 1987 Citibank began installing 900 touch-screen ATMs in its New York branch network.

Citicorp's retail banking group, known internally as the Individual Bank, relies on Transaction Technology Inc., a subsidiary in Santa Monica, Calif., for technological research and development.

Citicorp is no longer alone in exploring the future on its own technological terms. The *American Banker* survey shows that research and development is spreading in the banking industry. One-third of all operations officers surveyed, and 58% of those at institutions with $2 billion or more in deposits, either have or plan to establish a formal research and development function.

R&D "is expensive to do, and it can be a distraction from more important things, so we are deliberate about whom we will do an R&D effort with, and why," says David Cotterill, executive vice president of First Wachovia Corp., Winston-Salem, N.C.

"Senior management has been very supportive of technology, allowing purchases and investment to be made in hardware and software," says Mr. Cotterill, who now oversees the operations of both Wachovia Corp. and First Atlanta Corp., which merged in 1985.

"My chief executive officer will say today that if we didn't do what we did gradually over the past 15 years, we couldn't afford to do the same today," Mr. Cotterill says.

Bankers' growing interest in R&D does not translate into unquestioning acceptance of every new technological advance that comes their way. The survey reveals that bankers are more enthusiastic about technologies that they can put to use today than about more futuristic, less tested ideas.

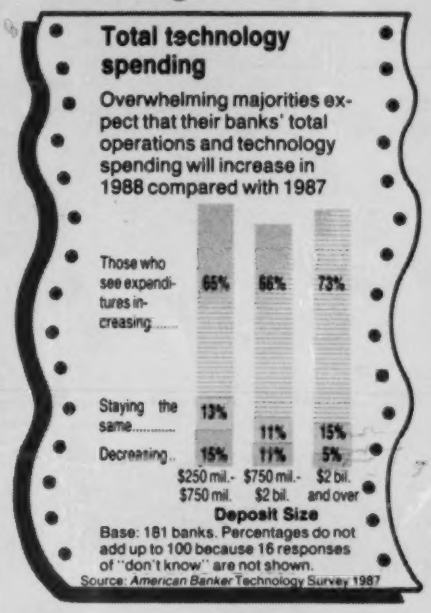
Desktop publishing, automated voice response systems, and 24-hour global securities trading fit in the former category. Smart cards, videotex systems, and biometric security methods, such as fingerprint readers and signature-verification devices, are seen as more speculative.

Robert Shay, professor of banking and economics at Columbia University Graduate School of Business, agrees with McKinsey and others that various approaches or nonapproaches to technology have created a multitiered banking industry. But he says that today's technology have-nots are not necessarily consigned to oblivion.

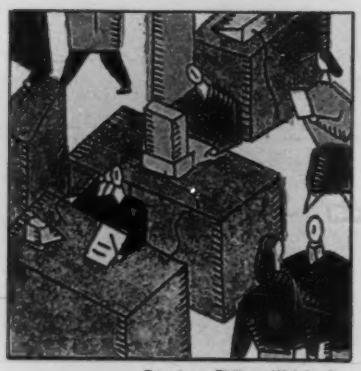
"A handful of banks is clearly outstanding in the way it has applied technology," Mr. Shay says. "A larger number of banks followed the leaders and are using technology very effectively.

"There are vast numbers of banks that have lagged behind and have not been effective with technology," Mr. Shay adds. "But with the costs of automation continuing to come down, and the ability to implement systems so much easier than it used to be, even the laggards can make quantum leaps, even those that lack well-developed plans or strategies." ■

Banks: Expectations of Change



The People



Drawings: Philippe Weisbecker

One-third of the nation's banks have a research and development department or are planning to start one ♦ The average bank spends $10 million per year on data processing ♦ Operations departments devote equal portions of their budgets to people and to systems ♦ About 20% of banks' full-time employees work in operations ♦ Banks lose about 11% of their technology professionals to turnover each year.

Managers Scramble to Keep Professionals Happy

Offering more than money can keep workers from defecting to a rival

BY JEFFREY KUTLER

Compensation, motivation, and retention of professional workers are of as much concern to bank operations managers as the computer systems these professionals are assigned to operate, the *American Banker*'s first annual survey on technology shows.

Commercial bank operations departments devote equal portions of their annual budgets to personnel and to systems. The costs of both are on a steady upward spiral, according to the survey.

Compensation packages for computer professionals are about equal throughout the industry, although more attractive at the largest banks. Senior operations managers express concern both with the increasing number of employees their departments require and with high rates of turnover among their most prized programmers and systems analysts.

Some turnover may be welcomed as attrition by banks seeking to make personnel cutbacks, from which the operations area is not immune. The executives surveyed have found that they can be more successful in controlling staff size than in controlling total technology spending.

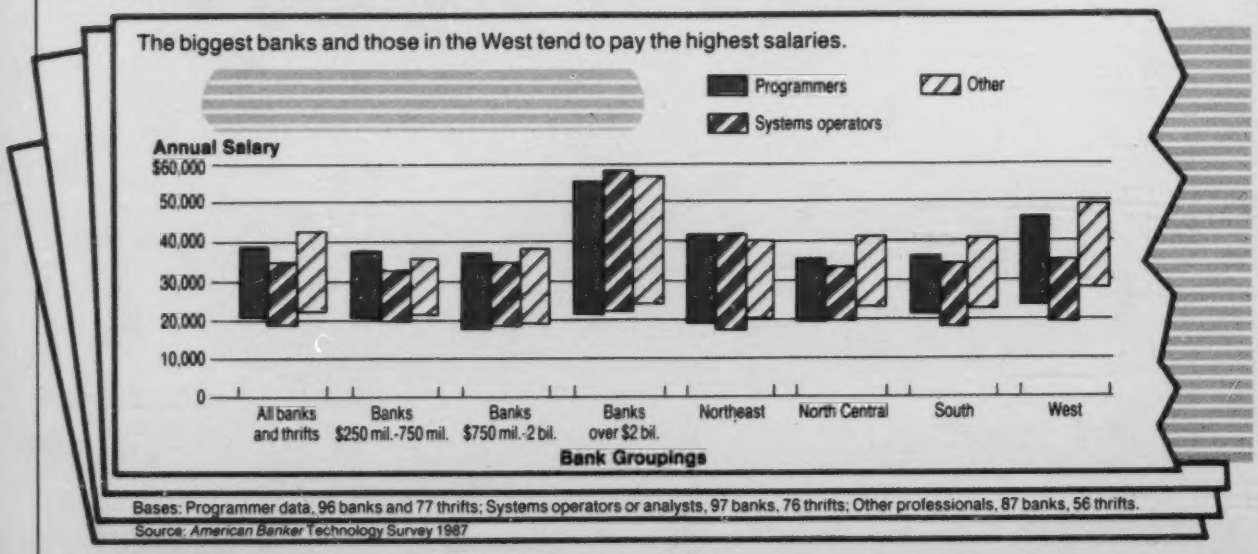
These are among the findings from *American Banker's* first extensive survey of operations and technology at financial institutions with $250 million or more in deposits, the group most likely to run their operations in-house.

Bankers and thrift managers alike have invested a substantial proportion of their personnel budgets in back-office operations. The survey reveals that about 20% of the average bank's full-time-equivalent employees work in operations. At thrift institutions the proportion is about 16%.

Thrifts employ fewer people in opera-

Average Salary Ranges for Computer Professionals

(By job category, institution size, region)



Bases: Programmer data, 96 banks and 77 thrifts; Systems operators or analysts, 97 banks, 76 thrifts; Other professionals, 87 banks, 56 thrifts.
Source: *American Banker* Technology Survey 1987

THE EDS APPROACH TO FINANCIAL PROCESSING.

After a year or two, a quick-fix processing system usually turns into a dead end. You either outgrow its capacity or its technology becomes obsolete. Then you're right back where your journey began.

At EDS, we're proving the benefits of looking down the road, every day. We see past your immediate processing problems and examine your long-term processing needs. And after we fully understand the way you do business, we deliver a solution that can truly go the distance.

EDS offers a complete family of financial processing solutions: INFORM,® Compete,™ Enhance,™ Integrated Financial System. Each one designed to get you through even the most abrupt market turns with reassuring response and control. To convert your ideas into products with captivating speed. And through the power of simplicity, provide maximum productivity down the straights of daily transactions.

Separately, EDS financial processing solutions offer individual avenues toward processing excellence. Together, they offer a full range of alternate routes for your expanding processing needs, from turnkey to teleprocessing to full resource management.

Don't put up with systems that take you nowhere fast. Call EDS for solutions that go the extra mile: 1-800-433-4055. In Texas, 214-604-4802.

EDS

More than systems... solutions.

© EDS 1987

tions, an average of 71 at those surveyed, compared with 289 at the average bank. The difference is more pronounced at institutions with more than $2 billion in deposits, where the thrift average is 142, compared with 922 at the banks.

Operations executives at banks of all sizes report spending about 40% of their operations and technology money on systems, another 40% on personnel, and the remaining 20% on other aspects of operations. Thrifts are relatively more systems-dependent, with 48% of expenditures going to systems, 37% to people, and 14% to other needs. (Percentages may not add up to 100 due to rounding.)

Average salaries for computer programmers, analysts, and other technology professionals range from $19,000 and $57,000. The low end of that scale is virtually the same regardless of bank size or region of the country. However, the big banks with over $2 billion in deposits and those in the western states tend to pay greater maximum salaries.

One large northeastern bank reports paying a top systems professional $250,000 a year, while another in the West pays a programmer $200,000.

Because they are in the most competitive market for professional employees, the biggest banks are most likely to augment salaries with bonuses and incentive plans. Half of banks with over $2 billion in deposits offer such benefits, compared with only one-third of all financial institutions surveyed. At the average institution with a bonus plan, the incentive payments equal 10% of total annual compensation.

Although personnel issues, such as the effect of salary on morale have been constant irritations for budget-conscious operations managers, bankers and employment counselors see some easing in the cost of keeping people happy. Inflation rates are down significantly from the late 1970s and early 1980s, lowering expectations of salary increases. And bankers say the supply of back-office professionals has expanded.

"There are more people with computer knowledge and abilities than ever before," says Patrick J. Crowley, executive vice president of Liberty Bank for Savings, Middletown, Conn. "It is still hard to find good people, but we are taking more opportunities to recruit them, and more are interested in the challenging work environment that we have created," Mr. Crowley says.

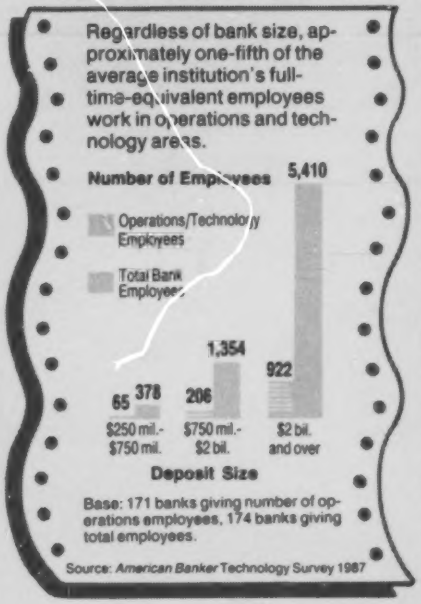
"Mergers and consolidations in the banking industry have increased the availability of higher-quality people looking for jobs," says David Cotterill, executive vice president of operations at First Wachovia Corp., Winston-Salem, N.C. "I have gotten more interesting resumes over the last three years than I got before the era of superregional banking. The supply is pretty good, and I think it will continue to be."

Mr. Cotterill's optimism about the availability of back-office professionals contrasts with the shortage of qualified personnel for lower-paid, entry-level operations jobs — a situation that also affects the search for front-office tellers. "We are going to have to become more creative in how to find workers and define the jobs they do," he says.

Bankers are learning to offer enticements beyond money to keep desirable employees from seeking opportunities elsewhere. Mark Silbert, vice president of Robert Half International, a New York-based personnel firm active in the data processing field, says bankers are using low-cost perks such as enhanced titles and more attractive working environments to raise morale and motivate workers.

"People at the lower end of the salary scale will always move to another company for $3,000 or $4,000 more a year.

Banks: The Personnel Burden



Programmer, Analyst Jobs Deemed 'Hottest'

Bank operations managers are evenly divided in their assessment of what professional job in their area holds the most potential for advancement.

Systems operators and analysts are rated "hottest" by 37% of the 164 bankers responding to an *American Banker* survey question on job desirability. That barely beats the 36% who believe programmers are better positioned to climb the corporate ladder.

Another 12% of respondents cite other operations positions that they say are more promising than either analyst or programmer, and 6% say the potential for advancement at banks is about equal for all types of computer professionals. Nine percent give no answer.

The strong showing in the survey for operators and analysts may be due to the fact that 40% of bank operations executives say these slots are the most difficult to fill. This compares with 34% who have the most trouble finding qualified programmers, and 14% who name other professional jobs. Three percent say no one job is most difficult to fill, and 9% give no answer.

The biggest banks, those with deposits in excess of $2 billion, differ from the norm in many aspects of the survey, but not on the hot-job question. Here their responses stay close to the mainstream.

This contrasts with the 50 banks in the $750 million to $2 billion range that go against the grain. At banks of this size, 40% say programming jobs are hottest and hardest to fill, while 32% accord this status to operator or analyst jobs.

But considering the margin of error for this relatively small segment of the industry, the anomaly can probably be dismissed as statistically insignificant.

— J.K.

"With McDonnell Douglas EDC, we are confident our merchants have the best service available."

MNet, one of the nation's fastest growing financial services companies and its subsidiary, MPACT Express Services, credit their success to providing unique solutions to customer problems by offering a full range of quality services. At the Point-of-Sale this means Electronic Draft Capture from McDonnell Douglas Payment Systems Company.

"Our merchants count on us to offer them the best services available," says Keith Gyssler, VP and General Manager of MNet/ MPACT Express Services. "After reviewing other programs, it was obvious that McDonnell Douglas had the most proven, dependable and cost-effective EDC in the industry. And because their Electronic Draft Capture program is so flexible, it can be customized to meet the specific needs of our merchants."

"MNet believes that the best solutions come from working as a team with our customers. We expect the same dedication from our suppliers. With McDonnell Douglas we have never been disappointed. Their programs and in-depth support services continue to meet our standards."

To find out how EDC from McDonnell Douglas Payment Systems Company can meet your POS needs, call John Maxey collect at 415/794-2634.

MCDONNELL DOUGLAS

39100 Liberty Street • Fremont, CA 94538 • (415) 794-1400

© McDonnell Douglas 1987

Meet your new sales force.

If there is one thing the nation's financial institutions agree on, it is this: the need to become more marketing-oriented, in order to compete for the retail customer's funds.

The difficulty, up to now, has been in redirecting operations-oriented bank personnel to become more sales-minded.

Now IBM has a solution.

Its immediate impact can be to increase the marketing effectiveness of the platform, branch management and teller functions.

The solution is the combination of the IBM 4700 Finance Communication System and the IBM SolutionPac™ offerings for Branch Bank Automation and Integrated Banking Applications.

Free your platform officers.

This IBM solution liberates platform officers from most routine fact-chasing and clerical duties, so they have time for selling.

With customer financial profiles, maintained by the Integrated Banking Applications SolutionPac and accessed through the Finance Communication System, platform officers can sell to and service their customers more effectively.

With an IBM workstation on the desk, a platform officer can perform "what if" calculations on money/time relationships and can instantly display the full range of investment options for the customer.

With the Finance Communication System augmented by an IBM Personal System/2™ operating the Bank Branch Automation SolutionPac offering, platform officers can be prompted through an entire marketing transaction and can use detailed financial analysis and color graphics to sell to their customers.

Thus, the platform person becomes someone to whom the customer can turn for investment information and counsel. And your financial institution can compete more successfully for a greater share of retail funds.

Tellers can help the sellers.

With the IBM 4700, teller transactions are on-line for faster service and better cash control. But this IBM system goes far beyond, to assist tellers in the art and science of selling. With access to customer profiles, tellers can be prompted to suggest appropriate bank products and to direct the customer to the right platform person.

Like all IBM products for banking, these solutions are supported by software, service and IBM marketing representatives and authorized remarketers who know banking. Additionally, IBM SolutionPacs include planning and implementation services to help you install these offerings.

To arrange to have an IBM marketing representative contact you, or for literature and a list of authorized remarketers, call 1 800 IBM 2468, Ext. 4. Or write IBM, Dept. 4-DBM, 101 Paragon Drive, Montvale, N.J. 07645.

And find out how the IBM 4700 Finance Communication System and IBM SolutionPacs can be a powerful force in your drive for sales.

IBM®

"SolutionPac" and "Personal System/2" are trademarks of IBM Corporation.
© Copyright 1987 IBM Corporation.

Every institution is vulnerable to that kind of turnover," Mr. Silbert says.

Indeed, the *American Banker* survey shows that the average commercial bank operations department loses 11% of its operations and technology professionals each year.

The average annual rate varies slightly by bank size — between 9% at the smaller institutions and 13% at the larger — which places the entire sample within a statistical margin of error. In other words, operations departments in virtually all banks with at least $250 million in deposits experience about the same degree of professional turnover.

Mr. Silbert states that turnover is likely to be greatest where banks pay the least-competitive salaries. Several banks report paying some computer professionals as little as $10,000 a year.

Banks: Employee Turnover

The average bank loses 11% of operations/technology professionals in a year. Most banks do better than the average but almost one in five sustains a turnover rate above 20%.

Annual Turnover Rate	Percentage of Banks by Deposit Size			
	All Banks	$250 mil.-$750 mil.	$750 mil-$2 bil.	$2 bil. and over
1% - 5%	32%	42%	25%	20%
6% - 10%	29%	25%	32%	33%
11% - 19%	10%	8%	9%	15%
20%+	18%	14%	25%	20%
Average Turnover Rate	11%	9%	13%	12%

Base: 181 banks reporting annual turnover rates. Percentages do not add up to 100 because one bank reporting no turnover and 19 providing no answer are excluded from the table.

Source: *American Banker* Technology Survey 1987

20% Turnover at Biggest Banks

Although most banks' turnover rates fall below the 11% industrywide average, turnover exceeded 20% at almost one in five banks.

Among operations managers responding to the survey, 70% say that turnover is lower in their areas than it is in other parts of their banks. Another 17% say their turnover is no worse than in other departments of their institutions.

The biggest banks are more susceptible to losing employees. One-fifth of banks with $2 billion or more in deposits suffer turnover rates above 20%; 60% of the operations managers at these larger banks — compared with 70% of the total bank sample — claim turnover rates are lower in their departments than in other areas of their banks.

Just under 60% of the bank operations executives claim that their staff members are more satisfied with their jobs than are employees in other areas. On a scale of 1 to 5, with 3 representing the job satisfaction of all bank employees, the survey responses for operations professionals average out to 3.61.

When asked where turnover rates are highest, 29% of bankers name the systems and programming function, 22% data processing operations, and 11% check processing. Of bankers in the $2 billion-and-over category, 48% mention systems and programming as the major contributor to turnover, indicating that their best programmers are most susceptible to better offers from competitors.

Relatively insignificant percentages of bankers identify such areas as management-information systems, customer accounting, and loan operations as having the most severe turnover problem.

The reason cited most often for high turnover at both large and small institutions is recruiting by other banks and corporations. This was mentioned by 32% of all bankers but by 45% of those at banks above $2 billion in deposits — where competition for skilled workers is most intense. Other reasons commonly cited for losing computer professionals are lack of advancement opportunities, mentioned by 16%, and inadequate compensation, cited by 12%.

Almost one-third of bankers blame outside recruiting for their turnover woes, with 72% of this group saying that such head-hunting is conducted by recruiters outside the banking industry.

This contrasts with 60% of bankers who say they generally recruit their own systems and programming professionals from within the banking industry. Another 17% seek workers from such nonbank industries as manufacturing, insurance, and data processing; 14% do most of their recruiting at universities.

The survey shows that Bank and thrift operations departments reach out for new employees through newspaper advertising, recruitment firms, and following up on referrals from current employees. Relatively few of the managers surveyed favor personnel networking or job fairs.

While about one-fourth of bankers say they improved career paths for their skilled employees and raised salaries to stem the turnover tide, another 40% say they took no action.

"A lot of bankers have accepted turnover as a fact of life in operations," says Mr. Silbert of Robert Half International. "Dealing with it is a real balancing act.

"If you bring up the subject to your employees, you may just encourage them to leave. If you do too much to stop it, you may be guilty of overkill, and that may be worse than turning a deaf ear."

Banks: Turnover Factors

Areas Where Employee Turnover Is Greatest

Systems and programming	29%
Data processing operations	22%
Check processing	11%

Reasons Most Often Cited

Recruiting by other companies	32%
Lack of opportunities to advance	16%
Inadequate compensation	12%

Actions Taken to Reduce Turnover

Nothing	40%
Improved career paths	27%
Raised salaries	24%

Base: 180 bank operations executives. Multiple answers accepted to question about actions taken.

Source: *American Banker* Technology Survey 1987

INFOPOINT.®

Now the world's leading banking software series is available from Computer Associates International, the world's leading independent software company.

INFOPOINT®:

■

Over 800 users with assets exceeding $900 Billion

■

Over 3,300 products licensed.

■

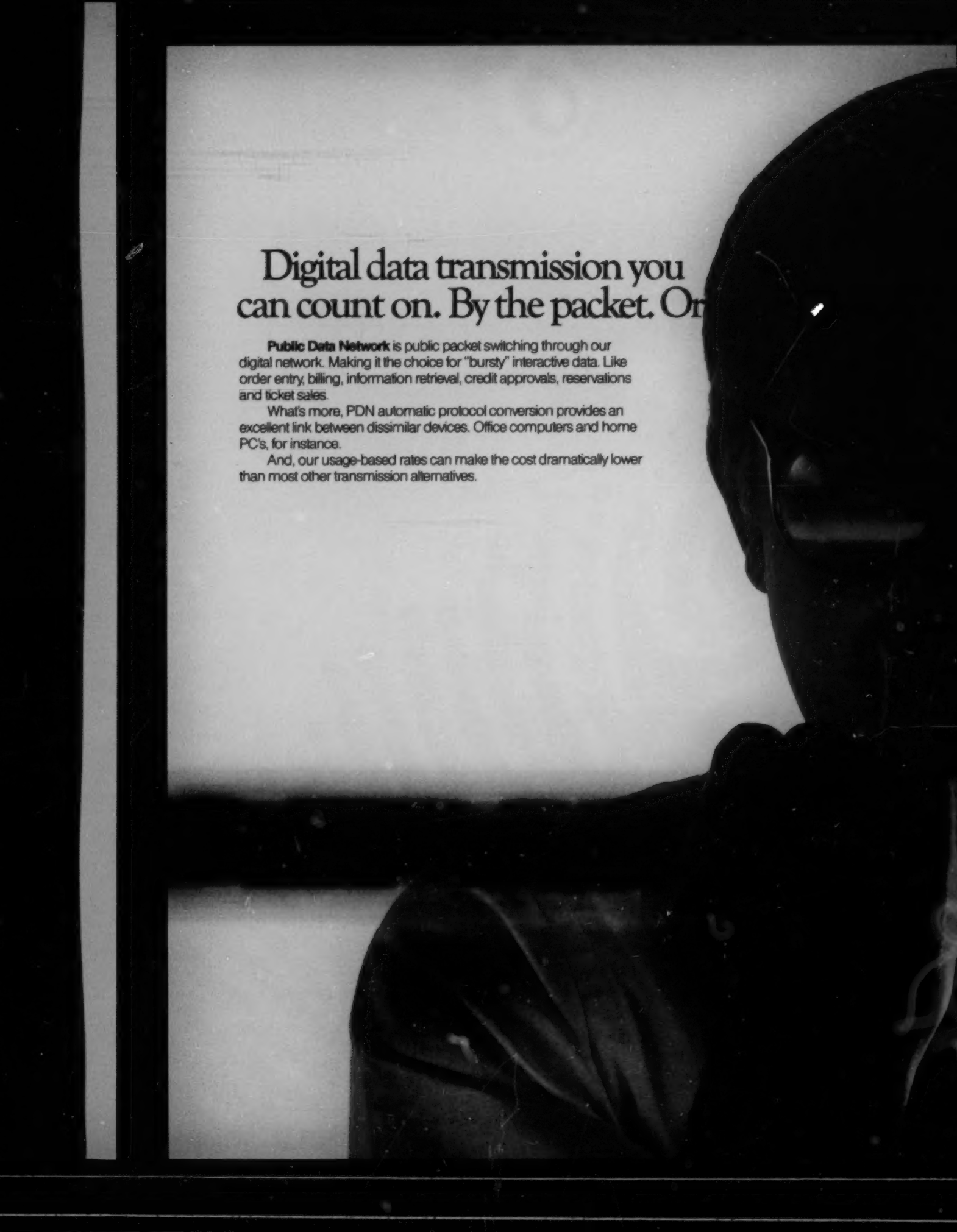
Over 25 proven applications.

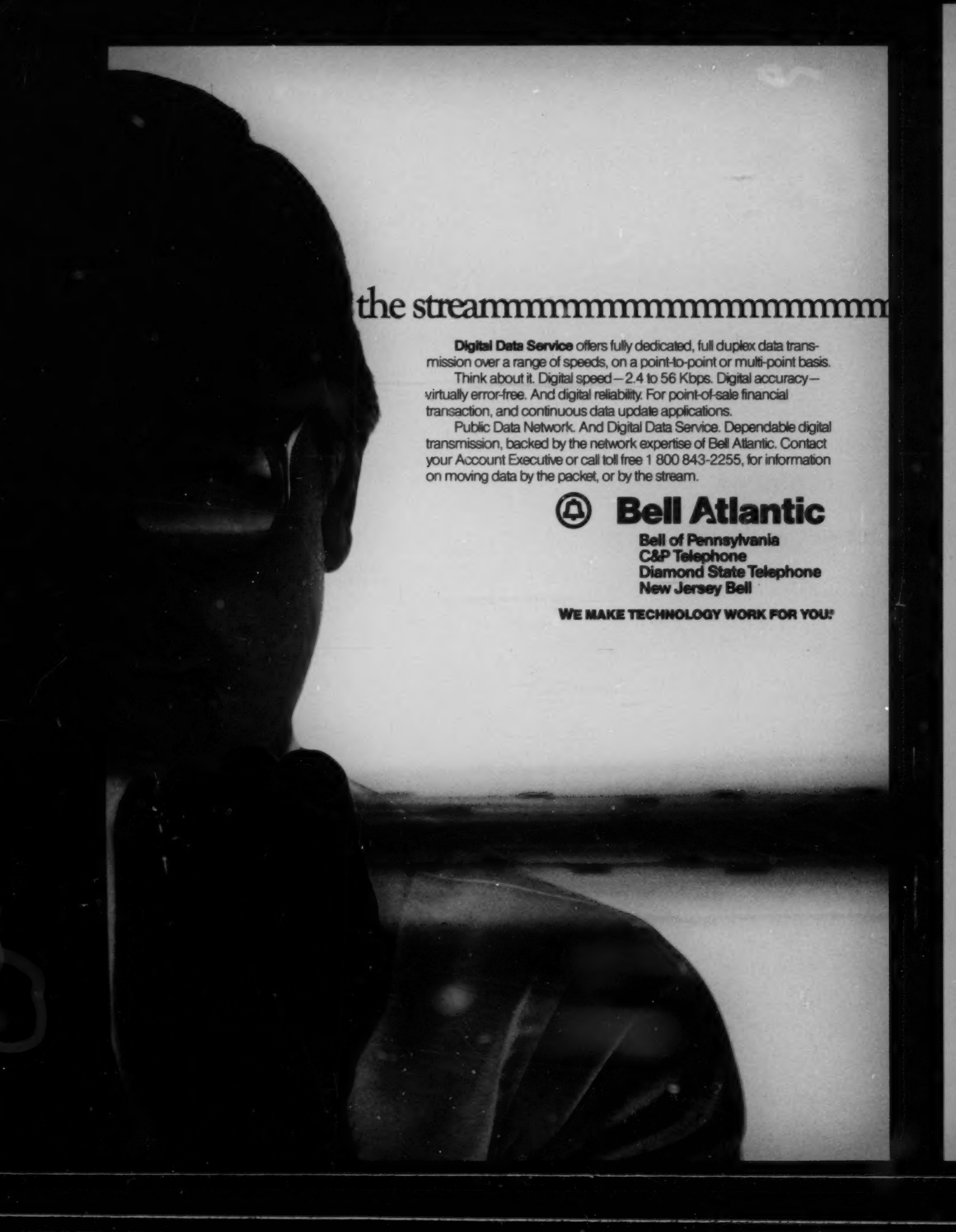
1-800-343-4133
In Massachusetts 1-800-322-0491
Computer Associates International, Inc.
711 Stewart Avenue
Garden City, New York 11530-4787

© 1987 Computer Associates International, Inc.

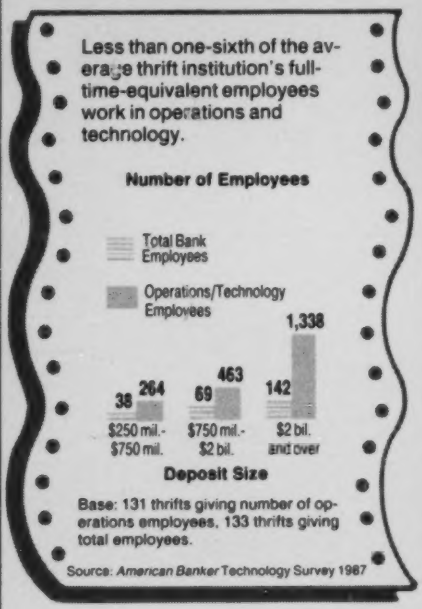
COMPUTER ASSOCIATES™

- World's leading independent software company
- Broad range of integrated business and data processing software for mainframes, mid-range and micro computers
- Worldwide service and support network of more than 70 offices


Digital data transmission you
can count on. By the packet. Or
Public Data Network is public packet switching through our digital network. Making it the choice for "bursty" interactive data. Like order entry, billing, information retrieval, credit approvals, reservations and ticket sales.
What's more, PDN automatic protocol conversion provides an excellent link between dissimilar devices. Office computers and home PC's, for instance.
And, our usage-based rates can make the cost dramatically lower than most other transmission alternatives.


the streammmmmmmmmmmmmm
Digital Data Service offers fully dedicated, full duplex data transmission over a range of speeds, on a point-to-point or multi-point basis.
Think about it. Digital speed—2.4 to 56 Kbps. Digital accuracy—virtually error-free. And digital reliability. For point-of-sale financial transaction, and continuous data update applications.
Public Data Network. And Digital Data Service. Dependable digital transmission, backed by the network expertise of Bell Atlantic. Contact your Account Executive or call toll free 1 800 843-2255, for information on moving data by the packet, or by the stream.
Bell Atlantic
Bell of Pennsylvania
C&P Telephone
Diamond State Telephone
New Jersey Bell
WE MAKE TECHNOLOGY WORK FOR YOU.

Thrifts: The Personnel Burden



"Bankers are using low-cost perks such as enhanced titles and more attractive working environments to raise morale and motivate workers."

The deaf ear may also work for institutions seeking to reduce their work forces by attrition.

A decreasing number of operations professionals is reported by 14% of commercial bankers in the survey, while 54% say their professional staff size is holding constant. The remaining 32% expect their professionals to grow in number.

Banks with $2 billion or more in deposits are the least optimistic about holding the line on employees, with half saying their professional staffs are growing from year to year. This compares with 28% of banks between $750 million and $2 billion and 26% of banks between $250 million and $750 million. The average rate of increase for banks anticipating personnel gains is 8%.

Mr. Silbert says those increases may be stimulated by changes in the tax law that make it less attractive for systems experts to sell their services to banks as self-employed consultants.

"Tax reform limited the opportunities for independent contractors to shelter their income," Mr. Silbert says. "Many of these contractors are now approaching banks in search of full-time jobs, and the banks are hiring."

Over the coming five years, the number of operations professionals is more likely to grow faster than total employment at the largest banks. Such growth is expected at 60% of the $2 billion-and-over banks, compared with about 40% of banks under $2 billion.

In terms of total operations and technology expenditures, two-thirds of all banks and 73% of the big-bank group say they will increase in 1988 over 1987. The average rate of increase for those expecting growth in this area is 9%.

About one in eight banks — and only one in twenty of those with over $2 billion in deposits — are bold enough to predict a year-to-year decline in operations costs, by an average of 15%. ■

Now choose the data processing system that will carry you safely into the future.

With Citicorp Information Resources, you'll never have to wait endlessly to offer new services to your customers or to comply with new regulations.

Our staff works with you to help you choose the right method of data processing for your institution. You can choose from on-line, in-house or facilities management services—all designed to keep obsolescence out of your retail transaction processing.

From the moment you are up and running, you're ahead of the others, and we'll keep you that way. We can make that promise because of who we are. More than 1,200 financial institutions in 40 states have already discovered the difference that makes!

If you'd like to learn more about how we can lift the data processing worries from your shoulders, contact Joan Skimmons at Citicorp Information Resources, 75 Holly Hill Lane, Greenwich, Connecticut 06830, telephone 1-800-243-4222 (in Connecticut, 625-7500).

Because you want to succeed, not just survive!

CITICORP
INFORMATION RESOURCES
A CITICORP COMPANY

R&D Is Gaining Momentum As Banks Look to the Future

The desire for a competitive edge is prompting managers to budget for creativity

BY JEFFREY KUTLER

Increasing numbers of banks and thrift institutions are emulating high-technology businesses by setting up formal research and development staffs, according to *American Banker*'s first annual survey of technology.

Although most depository institutions have not yet fully embraced research and development, one in three institutions with at least $250 million in deposits already has such a department or is planning to start one.

It is an indication that senior managers, particularly those at the larger commercial banks, are recognizing and endorsing technology as crucial to their future planning.

Among the larger institutions with at least $2 billion in deposits, 43% already have a formal R&D function and 15% more plan to have one. Those that have R&D units are spending an average of 7% of their annual data processing budgets — and in a few cases 10% or more — to develop new systems for back-office operations and service delivery.

These are among the findings from *American Banker*'s first survey of operations and technology at banks and thrifts with $250 million or more in deposits — those that are most likely to run their operations in-house.

The survey and subsequent interviews with bankers suggest that research and development is an amorphous concept that the industry is just beginning to understand and incorporate into operations planning.

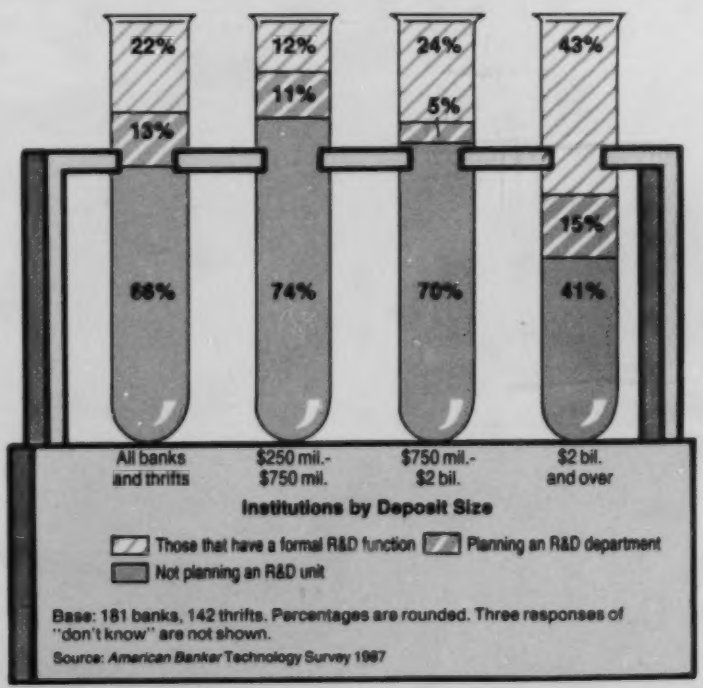
To the question, "Do you have a formal research and development function within the data processing area?" 323 bank and thrift executives responded. The answers do not vary significantly between commercial and savings bankers, with 22% of the total group saying they maintain an R&D function. Another 77% say they do not, and 1% give no answer.

Of those who do not have a formal R&D area, 13% say they plan to establish one. Banks and thrifts with more than $2 billion in deposits are twice as likely to have or plan an R&D function as those with deposits between $250 million and $2 billion. More than 70% of smaller institutions give no inkling that they will engage in R&D.

Half of those that currently conduct R&D do not choose to reveal the proportion of the data processing budget devoted to it. The total data processing expenditure for the average institution in the survey is $10 million per year, but this rises to $55 million at banks with more

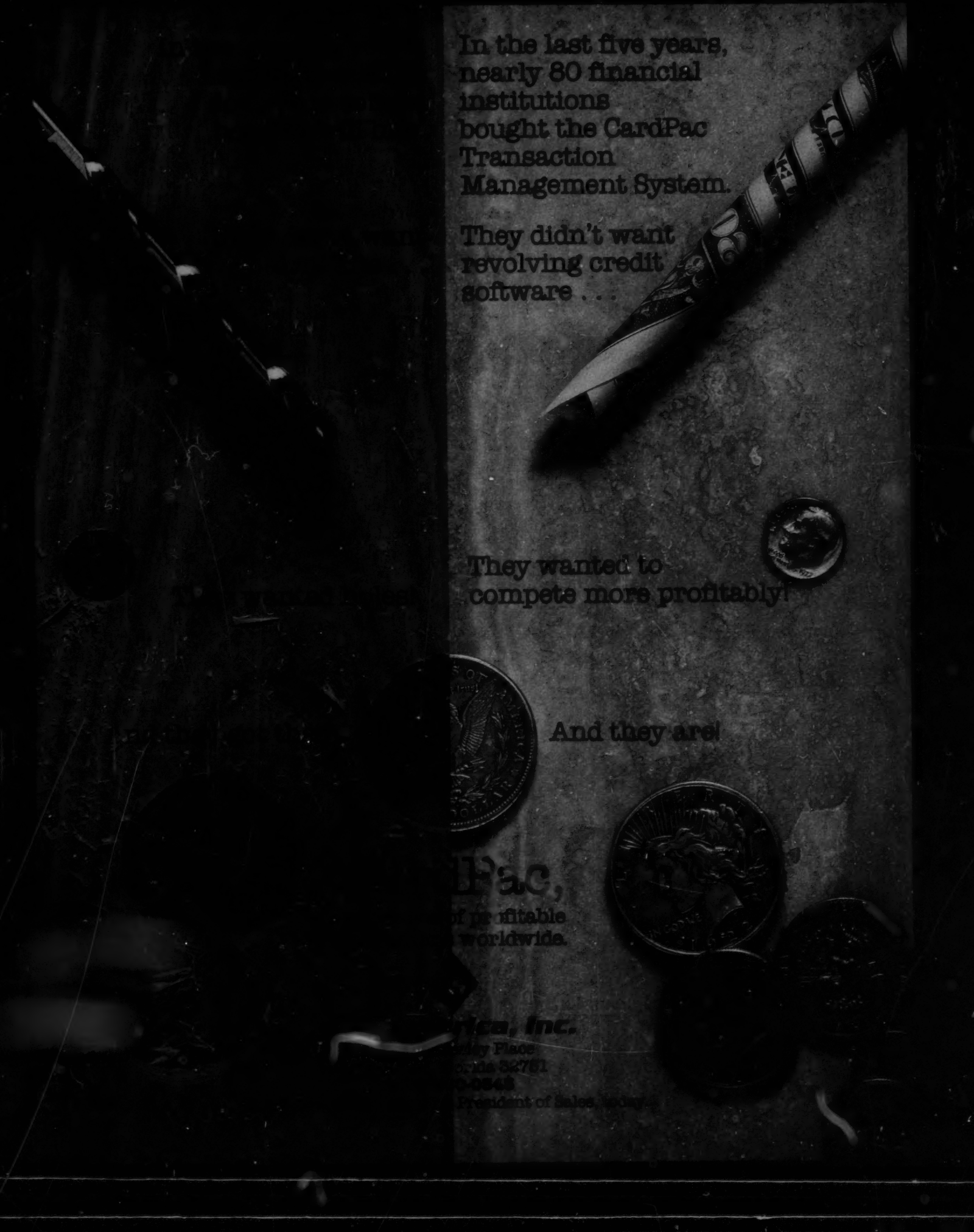
Research and Development

About one financial institution in five has a formal research and development function, but a majority of the largest institutions have one or plan one.



Base: 181 banks, 142 thrifts. Percentages are rounded. Three responses of "don't know" are not shown.

Source: *American Banker* Technology Survey 1987


In the last five years, nearly 80 financial institutions bought the CardPac Transaction Management System.
They didn't want revolving credit software . . .
They wanted to compete more profitably!
And they are!
CardPac,
worldwide.
inc.

than $2 billion in deposits.

About two-thirds of those institutions that do disclose the R&D allocation spend less than 5% of their total budget on this function; one-fourth spend more than 10%. But these figures may not be reliable in a strict, statistical sense and cannot be projected accurately to the total population of large financial institutions.

The average institution's budgetary allocation of about 7% to R&D is a more reliable statistic for the banks and thrifts providing this information.

Interviews with operations executives show that research and development means different things to different bankers. Rarely is it defined in banks the way it is at organizations such as International Business Machines Corp. or Minnesota Mining & Manufacturing Co. These corporate giants might plow as much as 10% of annual earnings back into what is, in effect, applied laboratory research.

> "Research and development has national policy implications and has entered into the current debate over U.S. competitiveness in world markets."

A World Apart

R&D staffs tend to be removed from day-to-day operations. They are charged with finding new solutions to identified problems, but in the interests of creativity they are not held to strict deadlines or profit-and-loss considerations.

A vivid description of high-technology R&D is the best-selling book by Tracy Kidder, "The Soul of a New Machine," which describes how a team of Data General Corp. developers retreated to a site remote from their customary offices and worked feverishly to create a new minicomputer system.

In that it fuels corporate growth, research and development has national policy implications and has entered into the current debate over U.S. competitiveness in world markets. Economists such as Lester Thurow, dean of the Sloan School of Management at the Massachusetts Institute of Technology, point to the dangers inherent in a decline in the proportion of R&D spending to 2% of gross national product from 3% in 1970. Others have criticized the U.S. economy's increasing dependence on government agencies such as the Defense Department and the National Aeronautics and Space Administration for R&D efforts.

The competitiveness debate focuses mainly on manufacturing industries. R&D in the service sector, which includes banking, is a relatively new frontier, and bankers are cautious about how they cross it.

Security Pacific Corp., Los Angeles, regarded as having one of the most sophisticated back-office operations, "simply cannot allocate millions of dollars to R&D. With our budgeting it is impossible to do that," says John P. Singleton, vice chairman of the holding company and chief executive officer of its data processing arm, Security Pacific Automation Co.

But Mr. Singleton considers R&D critical to preparedness for the future, to being on what technologists like to call the leading edge.

"We will enter into partnerships with vendors" to explore new technologies, he says. One technology of current interest to Security Pacific is image processing, the technique of converting checks and other paper documents into a digital form that can be transmitted and filed electronically. Image processing makes it less necessary to transport and store large volumes of paper, but it is still in an experimental stage.

"We will go to a vendor and say that if they develop hardware and software for a technology such as image processing, we will work with them," Mr. Singleton says. "If it pans out, we will go into it as their partner, perhaps collecting royalties on software sales, and getting a head start on our competition."

Linking Suppliers and Market

Such vendor-user partnerships are increasingly common. The system manufacturers bring a traditional R&D mentality, and their bank customers provide a potentially lucrative market.

In one case, a bank holding company established its own vendor, which treats R&D in a manner similar to a computer services firm: MTech Corp., the data processing subsidiary of MCorp, Dallas, now does 70% of its business with firms not connected to the holding company.

"Over the last three years, we averaged about $25 million a year on R&D," says Robert Heckman, executive vice president of MTech. "That would be well in excess of 10% of revenue for 1987, 12% to 13% in 1986, and 15% in 1985."

MCorp, which owns 80% of MTech, leaves the subsidiary free to manage its own affairs. Thus, there is no risk-averse banking mentality to hinder spending on new systems and improvements for MTech and its customers.

Of its total R&D budget, MTech devotes approximately 15% to upgrading existing systems, Mr. Heckman says. About 60% of the rest goes to improving data processing services and software, which provide the bulk of MTech revenue. The remaining R&D funds are for new products and capabilities.

"This category includes home banking, debit card, and smart card applications, which are now very small, but they are examples of pure R&D for us," Mr. Heckman says.

Careful in Choosing Partners

"We don't do R&D just for the sake of doing R&D," says David Cotterill, executive vice president of First Wachovia Corp., Winston-Salem, N.C. This company has several forward-looking research projects under way.

"It is expensive to do, and it can be a distraction from more important things," Mr. Cotterill says of First Wachovia's R&D philosophy. "So we are deliberate about whom we will do an R&D effort with, and why."

First Wachovia, a superregional holding company created from the 1985 merger of Wachovia Corp. and First Atlanta Corp., is enmeshed in vendor partnerships that Mr. Cotterill cannot discuss because of nondisclosure agreements. He says Wachovia's reputation as a progressive-technology bank, particularly in corporate cash management, has attracted much vendor interest in development partnerships.

Mr. Cotterill says the funding of development efforts is shared about evenly between the bank and the vendors, "especially when you consider the management and staff time they take up."

One product of R&D that Wachovia has disclosed is a version of artificial intelligence, programmed to simulate human thought processes. This expert system for evaluating commercial loans, called Lending Adviser, is being developed and perfected by Syntelligence Inc., Sunnyvale, Calif., in partnership with Wachovia and Wells Fargo Bank, San Francisco.

Wachovia also was a member of VideoFinancial Services, a consortium that developed electronic banking programs for homes and offices. VideoFinancial did not pan out as anticipated and was sold in 1986 to AMR Corp., the parent of American Airlines.

The chief organizer of VideoFinancial Services was John Fisher, senior vice president of Banc One Corp., Columbus, Ohio, whose name has become synonymous with R&D in banking. For 20 years, Mr. Fisher has been urging bankers to take risks in developing high-technology systems and services. His crusade has generally been more successful inside Banc One than outside, although that company's early experimentation influenced the industrywide adoption of credit cards, debit cards, and automated teller machines in the 1960s and 1970s.

"We allocate, at our bank, about 1% of earnings for R&D projects," Mr. Fisher says. "They are driven by the marketing side of the organization. They are usually not justifiable from a pure profit standpoint, but they have promise and usually involve the application of electronic technology."

One percent of the holding company's 1986 net income added up to $2 million, "but I don't necessarily spend it all," Mr. Fisher said. "This is more a process than it is a formal budgeting effort."

Part of Corporate Culture

But R&D is a constant at Banc One. Mr. Fisher says R&D was instilled in the corporate culture by the former chairman, John G. McCoy, and is a value shared by the current chairman, his son John B. McCoy. It continues unabated despite Banc One's priority of absorbing 10 regional acquisitions in 1986 and early 1987, among them American Fletcher National Bank, Indianapolis.

Banc One joined a vendor partnership with Electronic Data Systems Corp., Dallas, and Norwest Corp., a Minneapolis-based bank holding company, to develop a retail banking automation system. Meanwhile, Mr. Fisher has been championing a retail marketing concept, the Financial Marketplace, which offers banking and other financial services at a technologically advanced branch office outside Columbus.

"The Financial Marketplace is such a big thing for us, it can't be budgeted in a formal sense," Mr. Fisher says.

In one small part of that effort, Mr. Fisher has spent $100,000 to $150,000 on interactive videodisk systems. These kiosks with video screens provide services to customers and train tellers and customer-service representatives. Mr. Fisher was one of the first bankers to see a future in interactive video, and he has shared some of his findings with other bankers to help set a future course for the technology.

Mr. Fisher makes wider contributions by speaking at conferences, at meetings of financial analysts, and in the Banc One case study at Harvard Business School. "It's not entirely altruistic," he says. "We have some selfish reasons for being out front on some of these things."

Those reasons include Banc One's desire to attract and retain talented people, and to expand its businesses.

"When we took a flier on the credit card business back in the 1960s, we were a peanut-size bank that had to learn the business," Mr. Fisher says. "Once we learned it, we had to make a real business out of it.

"As we became successful with credit card and then ATMs, we were able to position the company as an innovative, forward-tilted organization. That had the added benefit of attracting attention in the investment community, and that got us talking to the Wall Street people."

One of Banc One's greatest coups, 10 years ago, was winning the bid to provide the Visa cards and checks that went along with the Merrill Lynch Cash Management Account. Other bankers criticized Banc One for "aiding and abetting the enemy." But Mr. Fisher says American Express might have taken the business if a bank like his had not.

"I don't think we would have gotten to work with Merrill Lynch if it wasn't for the reputation we had built over the years," he adds.

Mr. Fisher credits John G. McCoy, now chairman of Banc One's executive committee, for launching Banc One down the R&D road. "He was a very intuitive manager and a good gambler," Mr. Fisher says. "He had a burning desire to do something important and not just run another bank in an Ohio market. I share those inclinations.

"Most bankers don't operate this way. They'll take an idea, assign it to a committee or maybe a task force to study it, and then it dies." ■

VOICE OF THE BANKER

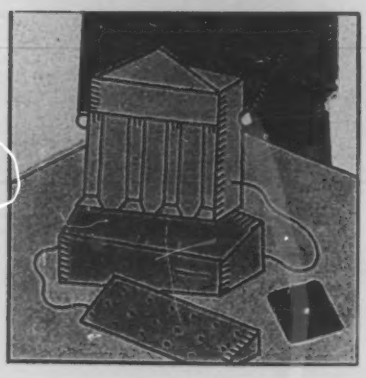
"THE PROBLEM IS TRAINING. TRAINING CAN'T BE ACCELERATED FAST ENOUGH TO KEEP UP WITH TECHNOLOGY."

— Senior vice president at Vermont bank

"IF PEOPLE DON'T USE THE SYSTEM CORRECTLY, THE SYSTEM ISN'T WORTH A DAMN."

— Senior administrative officer at Florida bank

The Thrifts



Thrifts Are Playing Catch-up With Big Operations Budgets

They are devoting a larger portion of the pie to technology than banks are

BY JEFFREY KUTLER

Operations departments at thrift institutions never lagged as far behind the times as their rivals at banks may have assumed — but they do have some catching up to do, according to the first annual *American Banker* survey of operations and technology in financial institutions.

Thrift operations are neither as large nor as well funded as those of commercial banks in the survey, but thrifts are devoting larger proportions of their budgets to back-office systems in an apparent drive to become more efficient.

Thrifts are at least as likely as banks to be increasing their spending for operations and technology in 1988, but the thrifts tend to be increasing their spending at a faster rate.

Although the thrifts' reputation for back-office sophistication may have been tarnished recently by dwindling profitability, many savings institutions have a longer history of automation than their commercial banking counterparts.

Thrifts began automating front-office branch operations, including on-line teller systems, in the 1960s, a decade ahead of most banks. They were in the forefront of automated teller machine and direct-debit point-of-sale efforts in the early 1970s, matching or surpassing the banks' willingness to experiment.

"People tend to forget not only that thrifts were first in branch automation, but that their systems today, unlike the banks', are on-line and real-time," says Patrick J. Crowley, executive vice president of Liberty Bank for Savings, Middletown, Conn.

"A lot of banks have gone to on-line systems," Mr. Crowley says. "But they don't post transactions until late in the day, and balances are not updated until the next morning. In our real-time systems, transactions at the tellers are posted immediately."

Ironically, as thrift institutions upgrade their branch networks, they are reorienting themselves to back-office proof-of-deposit systems like those the banks use. Most of the software packages currently on the market are built around proof-of-deposit rather than the real-time concept.

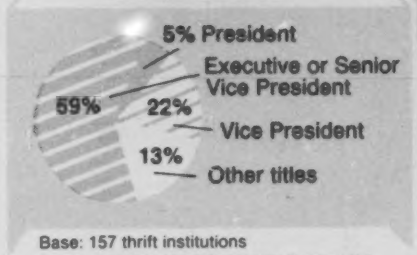
"Real-time processing was adopted at a time when the thrifts dealt mainly with passbook savings accounts and lobby traffic was generally very limited," says O. Tom Thomas, director of funds transfer for the U.S. League of Savings Institutions. "Now there is a lot more lobby traffic and the range of accounts being serviced is much broader.

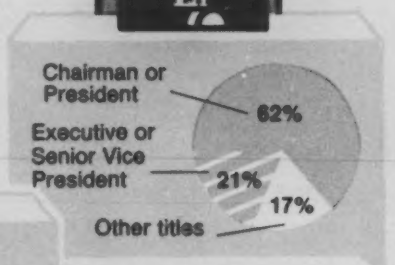
"A lot of savings institution branches are taking commercial deposits, which can be complex, and the tellers handle them in the same real-time way, which is not necessarily the most efficient," Mr. Thomas adds.

"Business customers realize that when they go to a commercial bank, the teller simply stamps the deposit slip and sends them on their way. Adjustments are made later in the back office."

Thrifts: Who Manages Operations

As at commercial banks, six in ten of the senior officers most responsible for thrift institution operations are executive vice presidents or senior vice presidents.





Whom They Report To

Most top operations officers at thrifts report directly to their chairman or president.

Base: 157 thrift institutions
Source: *American Banker* Technology Survey 1987

Operations as Part of Business

Savings institutions are no longer pointing to retail branch automation as their claim to modernity. Many, like Mr. Crowley's $600 million-deposit bank, have begun redefining operations as an integral aspect of their business.

"We brought our data processing shop in-house two years ago. Prior to that, we used a service bureau in Boston," Mr. Crowley states.

"It may cost us a little more to do that, but the cost is worth it because now we control our destiny. We don't have to wait for a third-party processor to make the upgrades and changes that we think are necessary."

In New York, Dollar Dry Dock Savings Bank broke from tradition and differentiated itself from much larger commercial banking competitors by converting all 23 of its offices into "branches of the future." Each includes a travel agency and brokerage office in addition to the traditional platform and teller stations.

The $3.9 billion-deposit Dollar Dry Dock accomplished this feat by combining nontraditional thinking with the most advanced level of branch automation that International Business Machines Corp. could provide. The successful concept was the result of research and development.

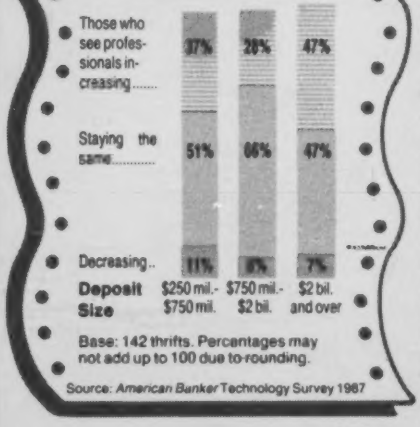
R&D is a formal operations function in 20% of all thrift institutions and 43% of those with more than $2 billion in deposits — percentages that are almost identical to those of commercial banks surveyed.

"We have seen a change in attitudes

Thrifts: Expectations of Change

Professional staff

Most thrift operations managers expect to hold the line on the number of professionals they employ.

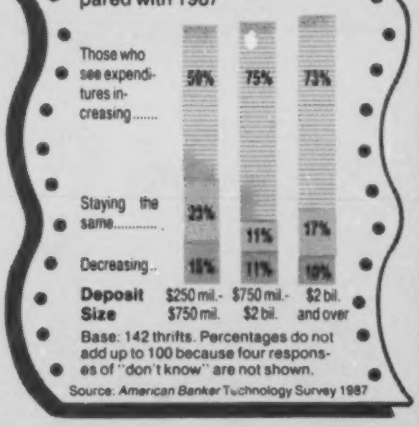


Base: 142 thrifts. Percentages may not add up to 100 due to rounding.
Source: *American Banker* Technology Survey 1987

Thrifts: Expectations of Change

Total technology spending

Large majorities expect that their institutions' total operations and technology spending will increase in 1988 compared with 1987



Base: 142 thrifts. Percentages do not add up to 100 because four responses of "don't know" are not shown.
Source: *American Banker* Technology Survey 1987

To make the right decisions you need American Banker

Success comes from your expertise ***and*** from knowledge you can draw on.

But you can't rely on second-hand information. It has to be very up-to-the-minute. When you need fast advice you want it from sources that are still warm.

Access to today's banking news is extremely useful and often critical in decision making. But yesterday's banking news is history.

Your sources of banking information have to be front line — from experienced reporters who are the first to spot shifting currents... those with a very real sense of change and where it is going. You need to know what industry leaders are saying... how they are reacting (those thinkers and doers whose judgements are sound and whose shrewd insights you respect).

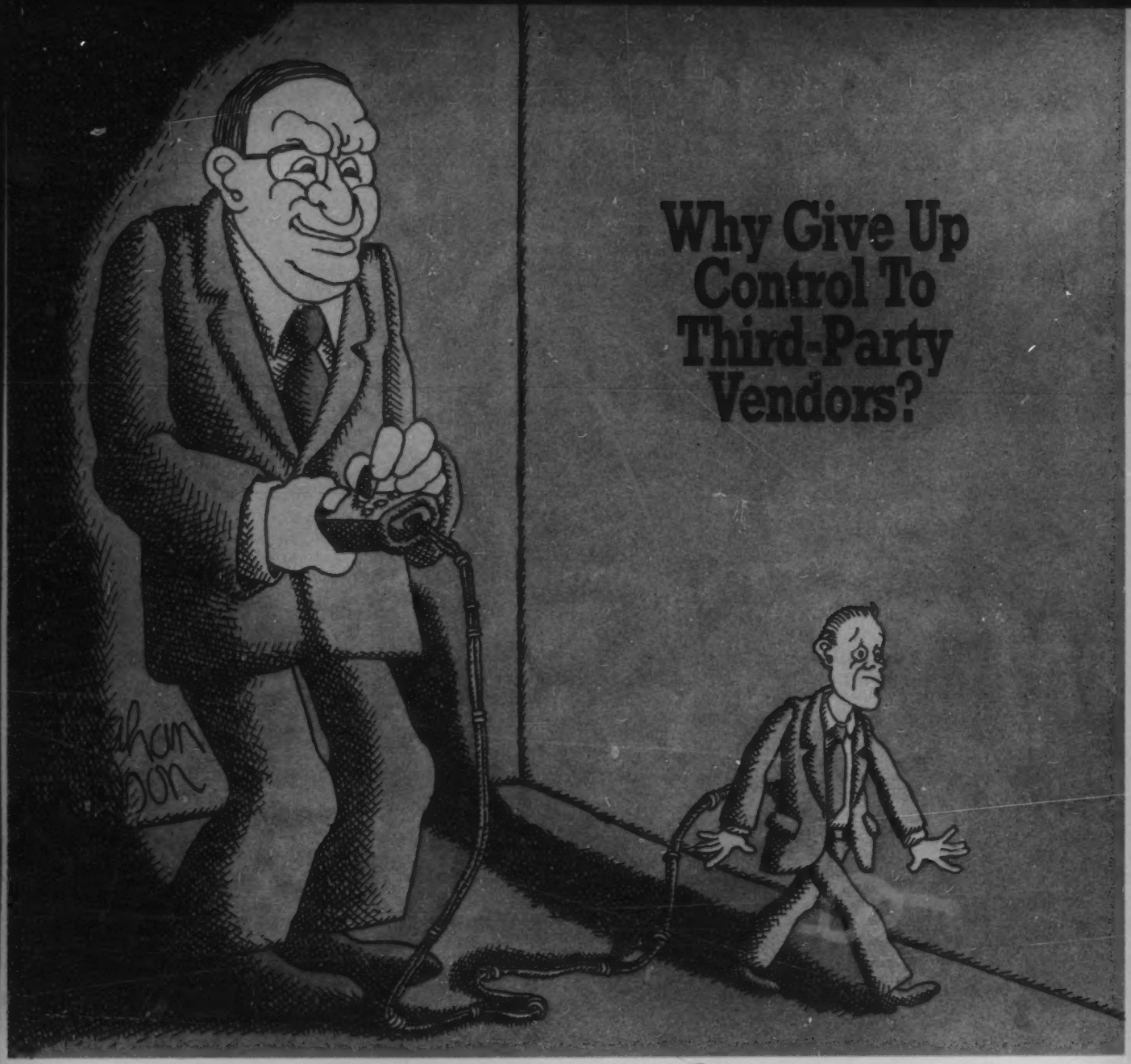
The in-depth information you draw on to help formulate strategy is just as critical as timing and structuring. You need perspective every day.

Profitability demands your very close attention to industry trends, cycles and direction. Every banker today faces the same "mountain of change" and is vulnerable.

Have you noticed that bank consultants and top-management seminar speakers quote American Banker chapter and verse to support their recommendations? And that smart bankers everywhere follow suit? You can be a smarter banker, too! You can use the same information tool used by over 100,000 other bankers — American Banker.

Bankers are fortunate that at least one news organization (American Banker's team of 105 reporters and correspondents) keeps its finger on the daily pulse of banking and financial services. Ideas gleaned from American Banker news items can boost earnings substantially for your bank. The publication is extremely cost effective... 250 daily issues for just $525 yearly. Each newspaper is delivered to you personally. SUBSCRIBE TODAY to the nation's only financial services daily!

To rush your order call TOLL FREE 1-800-221-1809
(in New York 1-212-943-9589)



ACI® And TANDEM™ Offer An In-House Alternative: BASE24 – cash manager.®

It's easy to lose control over your cash management processing costs and your future, using third-party vendors! Unless you have the in-house alternative from ACI... BASE24-cash manager.

BASE24-cash manager is a software system that allows financial institutions to provide cash management services to commercial customers. It's easy and efficient to use. It gives you the flexibility to tailor cash management services to specific market segments and individual customers.

BASE24-cash manager features balance and transaction reporting, transaction and payment initiation, and also cash concentration support. And BASE24-cash manager, offers intra-day reporting. Modular components operate on fault-tolerant Tandem hardware. Customers access the system from a personal computer, ASCII terminal or touch-tone phone. Information is available 24 hours a day, seven days a week. BASE24-cash manager also integrates with other BASE24® products to provide additional services.

So take control today. For information or a demonstration, call ACI: **402/390-7699.**

ACI

APPLIED COMMUNICATIONS, INC.
A U S WEST COMPANY

330 South 108th Avenue
Omaha, Nebraska 68154

Tandem™ is a trademark of Tandem Computers, Incorporated.

Thrifts: Employee Turnover

The average thrift institution reports a professional employee turnover rate of 14%, three percentage points higher than at commercial banks. But the distribution is similar to banks, with one in five thrifts sustaining annual turnover above 20%.

Annual Turnover Rate	Percentage by Deposit Size			
	All	$250 mil.-$750 mil.	$750 mil-$2 bil.	$2 bil. and over
1% - 5%	28%	22%	24%	30%
6% - 10%	22%	22%	21%	23%
11% - 19%	9%	5%	6%	20%
20%+	20%	20%	21%	17%
Average Turnover Rate	14%	16%	12%	12%

Base: 142 thrifts reporting annual turnover rates. Percentages do not add up to 100 because nine institutions reporting no turnover and 23 providing no answer are excluded from the table.

Source: *American Banker* Technology Survey 1987

toward automation and investment strategies," says Bruce Long, executive vice president of marketing at Dollar Dry Dock.

"After we tested selling nontraditional services alongside one of our branches, we concluded that we knew how to sell and were willing to make the commitment to change the culture," Mr. Long adds. "Now we see ourselves in a true retailing environment, and we are beginning to think differently. We measure profit by the square foot, just like Bloomingdale's does."

Resemble Banks Below $2 Billion

For the most part, the operational characteristics of the thrift institutions surveyed are similar to those of commercial banks with up to $2 billion in deposits. Above the $2 billion threshold, commercial bank operations well exceed thrift operations in size and scope.

The average commercial bank reports total operations and technology expenditures in 1987 of $15.2 million, more than four times the $3.5 million at the average thrift. But at institutions above the $2 billion-deposit level, the bank average is $55.3 million, almost eight times the thrift average of $7.5 million.

Two conclusions from the survey suggest that thrifts are attempting to close any back-office deficits: their distribution of operations-and-technology spending favors systems over people; and they plan to increase spending faster than commercial banks.

Thrifts on average spend more on systems and less on people than commercial banks do. Thrifts direct 48% of their operations expenditures to systems, 37% to payroll, and the remaining 14% to other needs. (Percentages do not add up to 100 due to rounding.)

By contrast, commercial bank executives say they spend 40% on systems, 40% on people, and 20% on other aspects of back-office operations.

These distributions do not vary with the size of the institution surveyed, nor do they change appreciably between between this year and 1988.

Equal proportions of banks and thrifts — 67% — expect total operations and technology spending in 1988 to rise above the 1987 level. Lower expenditures are expected by 13% of thrifts and 12% of banks in 1988, while the rest anticipate no change or give no answer to the question.

Also equal, at 73%, is the proportion of banks and thrifts with more than $2 billion in deposits that expect annual spending to rise.

But at those institutions that foresee a year-to-year rise in technology spending, the expected increase averages 15% at thrifts, compared with 9% at commercial banks. The largest commercial banks that anticipate spending increases expect to hold to the same 9%, but the thrifts with more than $2 billion in deposits foresee an average 26% budget rise.

"I'm not sure what the relative percentages are, but it is clear that both big banks and big thrifts are spending lots of money on technology," says Mr. Thomas of the U.S. League. "The smaller banks and thrifts probably find themselves in the same boat. They expect costs to rise and may be more frustrated about it because they are stepping up to a new generation of technology and it always turns out to be more expensive than they expect."

In parallel with the banks, big thrift institutions are less sanguine than their smaller competitors about their ability to keep staffing levels under control. Staff increases may actually be in keeping with their desire to upgrade system capabilities.

Of the thrifts with $2 billion or more in deposits, 47% see professional staff increasing in years to come — comparable to the 50% figure among big banks but significantly higher than the thrift industry norm of 36%.

Operations staffs are expected to grow faster than other departments over the next five years at 53% of thrifts, compared with 44% of banks. The thrift staffs are increasing from a much smaller base than at commercial banks. Only 71 out of 551 full-time employees at the average thrift institution work in operations; this rises to 142 out of 1,338 at thrifts with more than $2 billion in deposits.

At all commercial banks, the operations and technology staff numbers 288

Thrifts: Turnover Factors

Areas Where Employee Turnover Is Greatest

Systems and programming	21%
Branch operations	20%
Check processing	17%
Data processing operations	16%

Reasons Most Often Cited

Recruiting by other companies	34%
Lack of opportunities to advance	14%
Inadequate compensation	13%

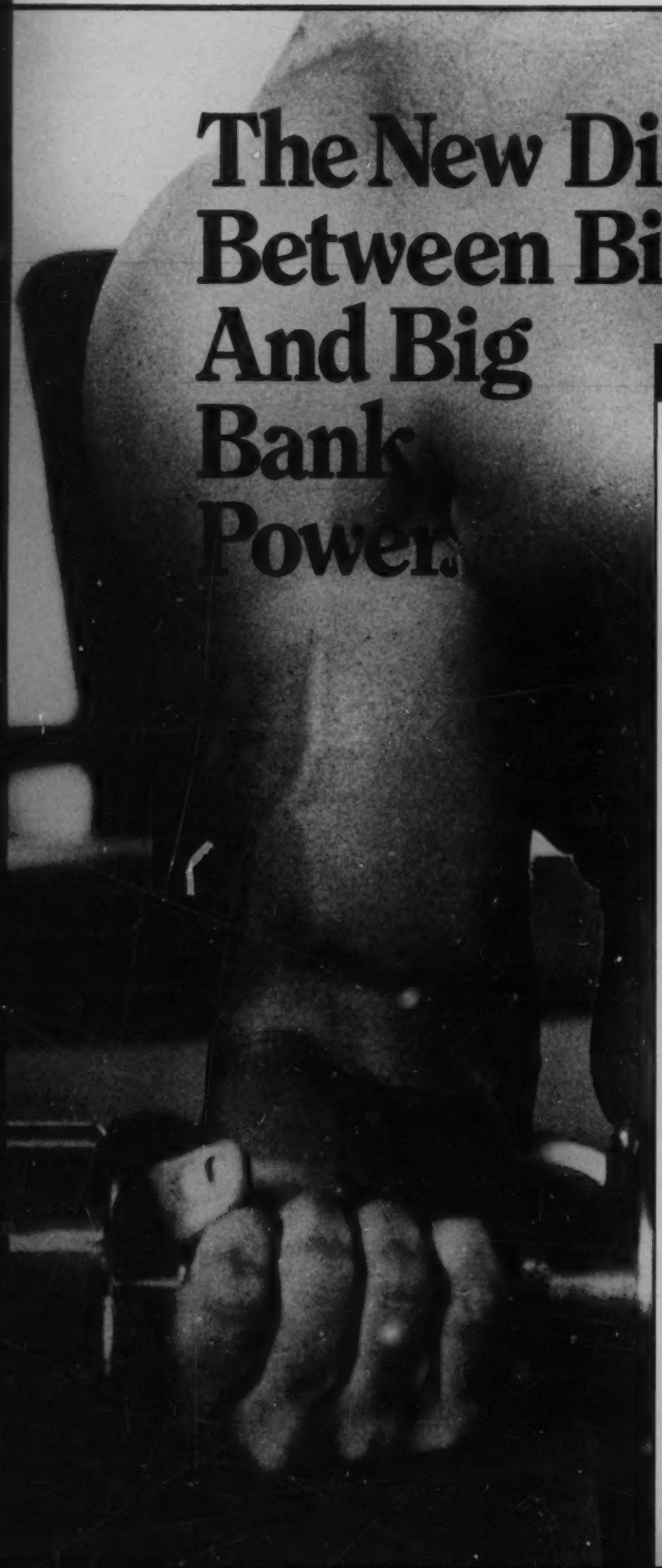
Actions Taken to Reduce Turnover

Nothing	41%
Improved career paths	25%
Raised salaries	25%

Base: 133 thrift executives. Multiple answers accepted to question about actions taken.

Source: *American Banker* Technology Survey 1987

FROM THE
WORLD LEADER IN
BANK SOFTWARE!



The New Difference Between Big Bank Size And Big Bank Power.

DIMENSION 4000

The one software system that does it all from the only company which has done it successfully in hundreds of banks for nearly 20 years!

DIMENSION 4000 from The Kirchman Corporation is an easy-to-convert, comprehensive, major bank software system that goes far beyond mere data processing to give you the tools for true information utilization. With easy operation, proven in banks around the world, DIMENSION 4000 now brings consistency and uniformity to what has often been, by necessity, a jury-rigged, patchwork sort of data processing operation. DIMENSION 4000 is structured around components that meet all of your primary banking needs — lending, deposits, transaction management and accounting along with management reporting. The components share pertinent information with each other and, simultaneously, deliver the "news" live to CIF and the general ledger. From the point of generation to the point of utilization, DIMENSION 4000 ensures that your staff has the most current information to make management decisions affecting individual customers or the entire bank. DIMENSION 4000, which runs under the IBM MVS or VSE operating systems, gives you the tools to practice relationship banking... to better your net non-interest margin... and to maintain a sharp, competitive edge in today's big bank arena. DIMENSION 4000 has the power to help you get out front. And with an historic commitment to innovation, The Kirchman Corporation will help you stay out front!

Formerly known as Florida Software, The Kirchman Corporation has been the choice of competitive bankers in large institutions for nearly two decades. We are proud to announce that IBM has recently selected The Kirchman Corporation as a partner in a new joint marketing program for our nation's banks.

To truly understand the power possibilities now available to your bank, please call us toll free at 1-800-327-1892 or call your IBM representative. Thank you.

THE KIRCHMAN CORPORATION

Bank Software. It's All We Do.
And We Do It Best!

P.O. Box 2289 • Orlando, FL 32802-2289

> "Although the thrifts' reputation for back-office sophistication may have suffered recently, many have a longer history of automation than their commercial banking counterparts."

out of 1,786 full-time equivalents. Banks over $2 billion average 922 technology workers out of 5,410 total.

In common with their commercial banking counterparts, thrifts must deal with double-digit rates of employee turnover. The average thrift in the survey reports losing 14% of back-office professional workers per year, slightly higher than the 11% rate for banks. But 20% of all thrifts, and 17% of those above $2 billion in deposits, have turnover rates in excess of 20%.

Thrift executives say employee turnover is high in four areas: systems and programming, branch operations, check processing, and data processing. Slightly more than one in four thrift institutions have raised salaries, improved career paths, or done both, to dissuade employees from leaving, but 41% report taking no action to reduce turnover.

Among commercial bankers, 40% say they have done nothing to combat back-office professional turnover. Many thrift and commercial bankers thus seem to regard turnover as a fact of life in computer operations.

"I am less concerned about turnover today than I was 15 years ago," says Mr. Crowley of Liberty Bank, who has been an active member of the National Council of Savings Institutions' operations committee for much of that time.

"Today, there are more people with computer knowledge and abilities than ever before," says Mr. Crowley. "We have also become much better at providing training to our people. Our EDP [electronic data processing] education budget is substantial compared with what it was even four years ago."

Reflecting their rising importance in the management hierarchy, 61% of the thrift executives in charge of operations have the title of senior or executive vice president. The chief operations manager reports to the chairman or president 54% of the time.

The chance for advancement from operations into other senior management positions is slightly less at thrifts than at commercial banks, according to the executives surveyed. Only 7% of the thrift officers believe operations people have an edge over other bank workers, while 11% of bankers see an operations background as more advantageous than other types of experience. ■

Keep up with news of competitive banking threats and new opportunities . . . every banking day.

Enter my personal subscription to the AMERICAN BANKER daily newspaper for:

☐ One year (250 daily issues) $525.
☐ 6 month trial subscription $275.
☐ Payment enclosed ☐ Bill me ☐ Bill my company

Name _____ Title _____

Firm _____

Address _____

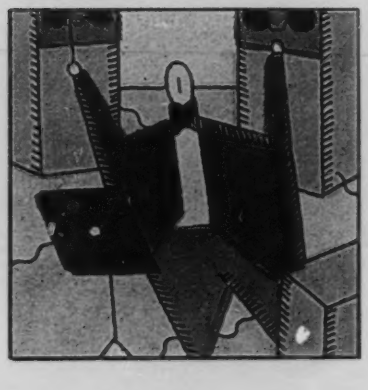
City _____ State _____ Zip _____

Phone _____

THE MOST IMPORTANT BANKING RESOURCE YOU CAN BUY . . . STRATEGIC INFORMATION DELIVERED DAILY.

Send to: **American Banker** 1 State St. Plaza, N.Y., N.Y. 10004

The Systems



IBM rates high in customer satisfaction ♦ Unisys takes the prize for price and ease of operation ♦ NCR falls behind in bank-user esteem ♦ Bankers applaud Software Alliance Corp.'s products ♦ Sales representatives get only passing grades from the bankers they serve ♦ Vendors too intent on making the sale fall from bankers' grace.

Large Institutions Pick IBM As Best Hardware Provider

Rivals Unisys and NCR get lower grades in all categories

BY DAVID O. TYSON

Customer satisfaction, it appears, is what made Big Blue big.

The midsize and large banks and thrifts that use primary computers from International Business Machines Corp. are markedly more satisfied than users of its two major rivals in banking hardware — Unisys Corp. and NCR Corp.

In the *American Banker*'s first annual technology survey, senior operations officers of institutions with $250 million or more in deposits were asked to rate overall satisfaction with their companies' mainframes. Ninety-five percent of those with IBM equipment rate it good or excellent. Comparable scores are 82% for Unisys and 48% for NCR.

No software vendor gets such a good mark. As detailed in a separate article, "Bankers Rate Their Software Good, But Not Great," on what bank operations officers think of application software vendors, the highest grade goes to M&I Marshall & Ilsley Bank, Milwaukee.

M&I software is sold through Software Alliance Corp., Berkeley, Calif. Nearly three quarters of the bankers rate those packages good or superior.

But the market is less oligarchic for software than it is for mainframes. Competitors abound, and none have the towering presence of IBM in hardware. In any of the numerous software niches, few have the market share of Unisys or NCR.

The telephone survey of 344 senior operations managers — 187 at commercial banks and 157 at thrift institutions — was conducted last summer by Trans Data Corp., Salisbury, Md., a research affiliate of the *American Banker*.

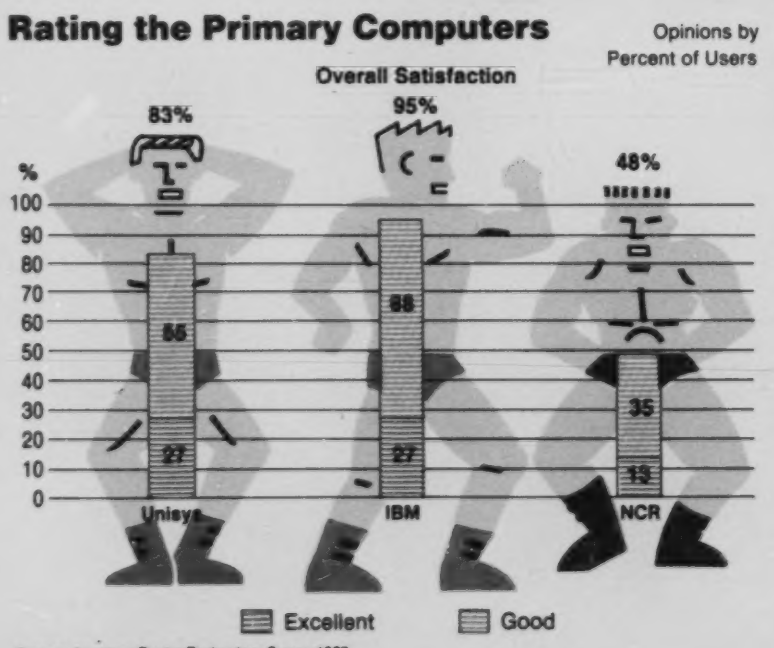
The officers were asked their views, not on computers in general, but on the primary computers they use in their shops. The 1-2-3 ranking — IBM, Unisys, NCR — emerges in responses to most of the 10 questions on exactly what they like or dislike.

Ease of operation and price are exceptions. On those questions, Unisys users give their vendor the best ratings. IBM ranks second in ease of operation and last in price.

Jack Schlosser, program marketing manager for the financial systems division of Unisys, says he is not surprised that its computers score best in ease of operation.

"Many surveys over the years show our systems are the easiest to operate in the industry," he says. "This just bears that out."

Price, although usually less important than other considerations in a decision to buy a mainframe, is the factor banks

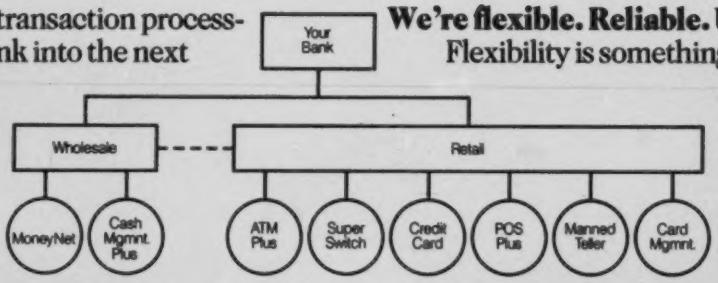


Source: *American Banker* Technology Survey 1987

David O. Tyson is an American Banker *associate editor.*

ACTION2000.® TANDEM.™
(Remember these two names and you can forget all the others.)

For integrated transaction processing to carry your bank into the next century, those are the only two names you need to know. No kidding.



A system that grows with you.

When it comes to transaction processing software, MTech's ACTION2000 and Tandem have joined together to create the only system that offers both retail and wholesale capabilities in one package. Of course, you purchase only as much of the system as you need right now. But as your needs grow, so can your system. That's because ACTION2000 and Tandem give you more options than anyone else in the business.

Our system is first and foremost.

One reason our systems do more is the fact we've been at it longer than anyone else in the business. Since 1977, to be exact. That was the year we installed our first system. A system which, we might add, is still up and running today.

SINCE 1977

But then, so are a lot of our other systems.

You'll find ACTION2000 and Tandem at financial institutions and EFT networks that demand powerful, dependable transaction processing systems with the flexibility to upgrade and expand as needs change.

We're flexible. Reliable. Unstoppable.

Flexibility is something we work really hard at—in our software, in our hardware and in our people. You'll find we're not so much suppliers as we are partners, listening to your needs and working with you to stay ahead of a constantly changing industry.

And of course, when it comes to dependability, Tandem Non-Stop Computers more than live up to their name.

They're the most reliable in the business—the perfect counterpart for ACTION2000 software.

One other word about dependability: MTech. Every ACTION2000 and Tandem system has the MTech name on it.

That means you've got the backing of the country's leading EFT provider and largest financial data processor. So you can depend on us to be there for you today, and tomorrow. And when you're making a decision as big as this one, that's definitely something worth remembering.

MTech
A Momentum Company

TANDEM COMPUTERS

The names to remember.

Tandem and Tandem NonStop Computers are trademarks of Tandem Computers Incorporated.

VOICE OF THE BANKER

"WE RELY ON THE TECHNICAL PEOPLE MORE THAN THE SALES PEOPLE WHEN DEALING WITH THE BIG VENDOR."

— Senior vice president of operations at Washington bank

and thrifts like least about their primary computers.

Asked to evaluate such factors on a scale of 1 (poor) to 3 (average) to 5 (excellent), the respondents' mean score regardless of manufacturer is 4.10 for overall satisfaction and 3.41 for price. IBM, usually the price leader, got the lowest rating — 3.16.

The executives are also not enthusiastic about the compatibility of their mainframes with other systems. The overall mean score on compatibility is only 3.59, with IBM at 3.87, Unisys at 3.12, and NCR at 2.81.

Mr. Schlosser of Unisys seems puzzled by the result.

"We have spent a lot of time, money, and effort on compatibility, including compatibility with IBM," he says.

"Being the market leaders, everybody has to be compatible with them [IBM]. I think we have done a good job of it.

"In anything from SNA on down to standard protocols, we've always been able to communicate into the IBM world, which is a *de facto* standard. You have got to be able to communicate in that world."

SNA stands for system network architecture, an IBM set of rules for linking its computers.

On the factor of software availability and vendor software support, the operations officers give an overall mean score of 3.71, with only IBM getting a good rating at 4.01. For Unisys it is 3.34, and for NCR 2.83.

IBM's rating on the availability factor is influenced by its dominance of the market. Software developers tend to write programs for the biggest pool of potential users.

Among the midsize and large institutions surveyed, nearly half say they use IBM. The proportion is 61% for banks and 32% for thrifts.

The bigger the institution, the more likely it is to use IBM. The proportion rises to 85% for banks with more than $2 billion in deposits.

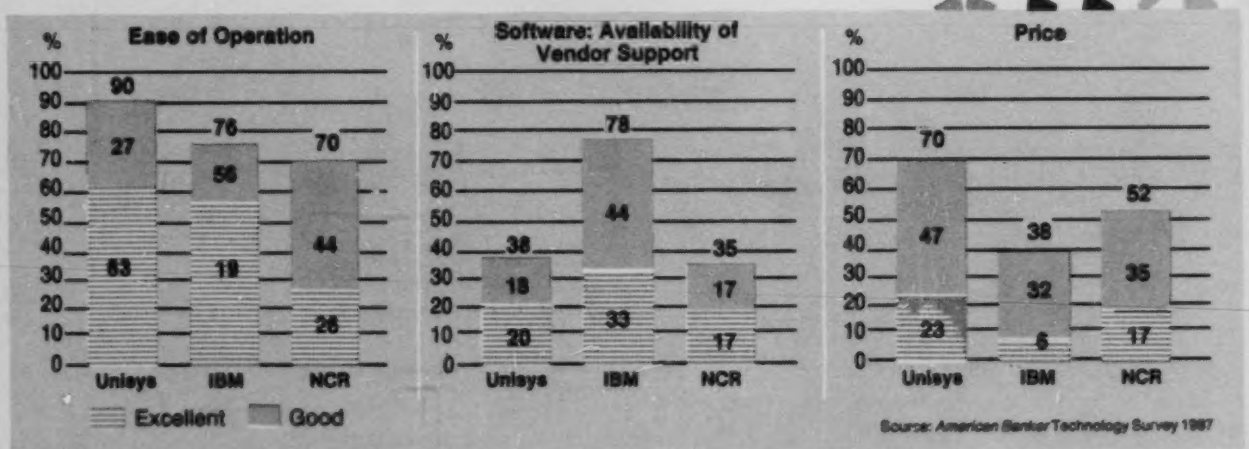
Trailing behind IBM with 19% usage is Unisys, the vendor of what was the Burroughs line of computers. NCR is next, with 7%. The others have less than 1% of the market, so the results for them are not statistically significant. And a fifth of the institutions surveyed do not operate their own computers.

It should be remembered that the survey covers midsize and large banks, not community banks. Unisys and NCR are heavier in the market that includes institutions with less than $250 million deposits, about half the nation's banks.

Other Trans Data surveys show that NCR exceeds IBM in sheer number of installations among all banks. Most of its customers are small.

Rating the Primary Computers

Opinions by Percent of Users



Source: American Banker Technology Survey 1987

The Plus System® Network Continues To Chart A Steady Course For International Growth.

•Peter Rahmer
Toronto Dominion Bank

More and more leading financial institutions throughout North America are discovering the advantages of membership in the PLUS SYSTEM network of internationally shared Automated Teller Machines (ATMs). Toronto Dominion Bank, one of Canada's largest and most prestigious financial institutions with over 950 branches and 630 ATMs, is one of the newest PLUS SYSTEM members. Mr. Peter Rahmer, the Visa general manager of Toronto Dominion, comments on his bank's decision to join the PLUS SYSTEM network.

"We are committed to products that provide service, convenience and value to our customers," stated Mr. Rahmer. "The PLUS SYSTEM affiliation certainly meets this objective by giving our customers significantly expanded access to cash through PLUS SYSTEM ATMs located across North America and beyond. Geographical convenience, proven reliability, and organizational strength arising from the alliance of Visa and Plus System, Inc., all make a compelling case for membership."

Isn't it time your financial institution joined the leading ATM network as a PLUS SYSTEM member? For complete details on all the options available, call Ron Reed at Plus System, Inc., (303) 620-7318.

Plus System

THE LEADING ATM NETWORK

"Although price is usually less important than other considerations in a decision to buy a mainframe, it is the factor banks and thrifts like least about their primary computer."

Hardware reliability gets the best rating in the operations officers' evaluation of their primary computers. On a scale of 1 to 5, the overall mean score is 4.53, which approaches a rating of excellent.

For IBM, the mean is 4.63, with 97.5% of the officers grading it good or excellent.

For Burroughs it is 4.48, which is not changed when the few users of Sperry/-Univac machines are counted. Burroughs Corp. and Sperry Corp. merged in September 1986 to form Unisys.

For NCR the mean score is 4.04, its best rating on any factor.

Next to hardware reliability, banks and thrifts give the best marks when asked to compare their mainframe vendor's equipment with state-of-the-art technology. The overall mean score is 4.27.

IBM hardware, which is state of the art in many instances, fares best among the three major vendors, with a mean grade of 4.47. Unisys scores 4.10, and NCR 3.35.

The operations officers also were asked to compare the overall performance of their primary computer systems and after-sale support by the vendor with initial expectations. They were given three choices: better than expected, as expected, or less than expected.

Overwhelmingly, bankers say the performance and support is what they expected. That is the response of 81% across the board, regardless of vendor. Another 11% say better than expected, and 6% say less than expected.

Among Unisys users, 22% say computer performance is better than expected, the best vote of confidence for any of the three major vendors. Another 72% say it is as expected, and 7% say less than expected.

About 8% of IBM users say their computers perform better than expected, 90% say they are as expected, and 3% say less than expected.

For NCR users, 9% say their computers are better than expected, 70% say they are as expected, and 22% say less than expected. The percentage totals do not equal 100 due to rounding.

Commenting on survey results that show NCR lagging in bank-user esteem, Raymond L. Miolla, vice president of NCR's financial system division, says that the company has made major new product announcements in the past two years in all significant categories of the financial marketplace.

"NCR is now in the early stages of installing the Universal Financial System, which provides financial institutions of over $250 million in deposits with comprehensive account-processing software," he says.

"The software, which works with the new NCR 9800 processor, has been designed to provide customers with ease of use and cost-effective solutions in all phases of retail banking.

"Customer satisfaction is the cornerstone of our efforts, and we believe that the enthusiastic customer response to our new offerings was not reflected in the survey," Mr. Miolla says.

A tribute comes from William G. Seymour, vice chairman of the systems design and software firm of Broadway & Seymour, Charlotte, N.C., which bumps into NCR in bidding for installations at banks.

"I cannot rate them as a user," he says, "but I can speak as a competitor. They are a fierce competitor in the branch automation field with their Tower system, and a very able competitor in the community bank arena."

Mr. Seymour says that in branch automation, NCR typically will go to a prospect and sell the power of the personal computer or the intelligent processor in the branch. "I wish they weren't so good as a competitor," he says. ■

VOICE OF THE BANKER

"THE PROBLEM IS GETTING VENDORS OF BRANCH AUTOMATION EQUIPMENT TO REALIZE WHAT BANKS NEED AND WHAT WOULD BE GOOD FOR BANKS AS OPPOSED TO WHAT THEY FEEL THE BANKS NEED. THE VENDORS NEED TO UNDERSTAND BANKING."

— Vice president of Nebraska bank

Citibank, NA	1.	51. Rainier National Bank	
Chase Manhattan Bank, NA	**2.**	52. Maryland National Bank	
Bank of America NT & SA	**3.**	53. European American Bank	
Manufacturers Hanover Trust Co.	**4.**	**54. Connecticut National Bank**	
Chemical Bank	5.	55. First National Bank, St. Paul	
Morgan Guaranty Trust Co.	6.	**56. National City Bank**	
Continental Illinois National Bank & Trust Co.	7.	**57. Morgan Bank (Delaware)**	
Bankers Trust Co.	8.	58. United Virginia Bank	
Security Pacific National Bank	**9.**	59. Fleet National Bank	
First National Bank, Boston	10.	60. AmSouth Bank, NA	
Wells Fargo Bank, NA	**11.**	61. First Interstate Bank of Oregon, NA	
First National Bank, Chicago	12.	62. Shawmut Bank, NA	
Mellon Bank, NA	13.	**63. Sanwa Bank California**	
Marine Midland Bank, NA	14.	**64. NCNB National Bank of Florida**	
Bank of New York	**15.**	65. Mellon Bank (East), NA	
First Interstate Bank of California	16.	66. Provident National Bank	
Texas Commerce Bank, NA	17.	67. Trust Company Bank	
National Westminster Bank, USA	18.	68. First National Bank, Atlanta	
National Bank of Detroit	19.	69. Midlantic National Bank	
Irving Trust Co.	20.	70. First Pennsylvania Bank, NA	
RepublicBank Dallas, NA	21.	71. First Interstate Bank of Arizona, NA	
NCNB National Bank of North Carolina	**22.**	72. Huntington National Bank	
Pittsburgh National Bank	23.	73. Allied Bank of Texas	
Bank of New England, NA	**24.**	74. Society National Bank	
InterFirst Bank Dallas, NA	25.	75. Manufacturers Hanover Bank (Delaware)	
Union Bank, Los Angeles	26.	76. Republic National Bank	
First National Bank, Minneapolis	27.	**77. MBank Houston, NA**	
Seattle-First National Bank	28.	**78. First National Bank of Maryland**	
Fidelity Bank, NA	**29.**	**79. Bank Leumi Trust Co.**	
AmeriTrust Co., NA	30.	**80. Florida National Bank**	
Wachovia Bank & Trust Co., NA	31.	81. Chase Lincoln First Bank, NA	
Philadelphia National Bank	32.	82. Industrial Bank of Japan Trust Co.	
MBank Dallas, NA	**33.**	83. First National Bank, Louisville	
Connecticut Bank & Trust Co., NA	**34.**	84. American National Bank & Trust Co., Chicago	
Bank of Tokyo Trust Co.	35.	85. Bank of California, NA	
Harris Trust & Savings Bank	**36.**	86. Bankers Trust (Delaware)	
First City National Bank	37.	**87. Continental Bank**	
Citizens & Southern National Bank	38.	88. South Carolina National Bank	
Southeast Bank, NA	39.	**89. United Jersey Bank**	
First Fidelity Bank, NA	40.	90. First Wisconsin National Bank	
Sovran Bank, NA	41.	91. Signet Bank, Virginia	
First Union National Bank	**42.**	92. First Jersey National Bank	
Comerica Bank-Detroit	**43.**	93. First Tennessee Bank, NA	
Meridian Bank	44.	**94. BancOhio National Bank**	
Norwest Bank Minneapolis	45.	95. Riggs National Bank	
California First Bank	46.	96. Fuji Bank & Trust Co.	
Northern Trust Co.	**47.**	**97. Bank One Indianapolis, NA**	
Manufacturers National Bank	48.	**98. Mercantile Bank, NA**	
United States National Bank	49.	99. Citizens Fidelity Bank & Trust Co.	
Valley National Bank of Arizona	**50.**	100. Bank of Hawaii	

■ AFS Client Banks

AFS *Reshaping the Art of Lending*

AUTOMATED FINANCIAL SYSTEMS, INC.
123 Summit Drive, Exton, PA 19341 (215) 524-9300

Source: AMERICAN BANKER "Top 300 Banks in Business Lending." Ranking as of December 31, 1986.

Bankers Rate Their Software Good, but Not Great

M&I Marshall & Ilsley gets the best marks, with IBM coming in second

BY DAVID O. TYSON

Most senior operations officers of midsize and large banks give unenthusiastic but above-average marks to the applications software they run on their mainframe computers.

The bankers were asked to use a scale of 1 to 5 to rate the overall quality of the applications packages. Their responses produce a mean score of 4.20, the highest of all, for the integrated software developed by M&I Marshall & Ilsley Bank, Milwaukee. Software Alliance Corp., which has the franchise from M&I, has installed the system in 50 large institutions, mostly banks, that use International Business Machines Corp. mainframes.

As the accompanying table shows, that is the best grade achieved by any of the 13 banking software vendors tallied, and the only grade above 4. However, Trans Data Corp., which conducted the *American Banker*'s first annual technology survey, points out that the result is not necessarily statistically significant with respect to the other mean scores because a relatively small number of M&I users responded.

IBM is second, with a mean score of 3.80, based chiefly on its check-processing software, but also on its software for branch banking, teller, and administrative terminals.

Unisys Corp. is third in the ratings, with a 3.76 mean score. Hogan Systems Inc. is fourth, with 3.65. And Shaw Systems Associates, a Houston firm, is fifth, with 3.59.

This survey of 344 senior operations managers covers banks and thrifts most likely to run their operations in-house — those with $250 million or more in deposits.

According to Trans Data, the results for IBM and Unisys are statistically significant with respect to the bottom five vendors on the list. This means that the two top-ranked vendors would remain ahead even if the margin of error favored the other five.

Trans Data also says that Uccel Corp., acquired by Computer Associates Inc. after the survey was conducted, is not statistically different from Kirchman Corp. or NCR Corp. — meaning those two could rank ahead of Uccel if the margin of error favored them.

M&I started developing its banking system for in-house use in 1976, initially for demand-deposit accounts. In 1979, it decided to sell the system to others and installed it at three banks — Chase Manhattan Bank, New York; Riggs National Bank, Washington; and Central Fidelity Bank, Richmond, Va.

By 1981, it had plans to build a fully integrated system and struck a deal with Software Alliance to market the software on a revenue-sharing basis. M&I Data Services Inc., data processing subsidiary of the Milwaukee bank, now owns the product, collects royalties, does the upgrades and new releases, and helps Software Alliance to market, install, and maintain the system.

"We believe we're on the right path in providing a full series of integration services, coupled with our very fine products," said Jon T. Blankmeyer, president of Software Alliance. "And it's always pleasing to find that someone else's independent survey verifies what we always thought was the truth."

IBM and Check Processing

The survey shows that IBM, rated second by bank software users, has nearly one-third of the check-processing software market among banks, including more than half of those with more than $2 billion in deposits. In branch banking, teller, and administrative terminals, it has about a tenth of the market, followed by NCR.

Otherwise, IBM is the biggest produc-

Rating the Software Vendors

Mean scores on a scale of 1 to 5	
M&I (Software Alliance)	4.20
IBM	3.80
Unisys (Burroughs)	3.76
Hogan Systems	3.65
Shaw Systems Associates	3.59
UCCEL (Computer Associates)	3.58
McCormick & Dodge	3.57
Unlisted vendors	3.40
Systematics Inc.	3.36
Management Systems of America	3.32
NCR Corp.	3.24
Kirchman (Florida Software)	3.16
Automated Financial Systems	3.14
Anacomp	2.78

Source: *American Banker* Technology Survey 1987

Three important factors in selecting a data processing company.

Responsiveness

Averaging over 15 years of experience, M&I's account managers specialize in results. Dedicated to customer satisfaction, these banking veterans coordinate the talents of the entire M&I support team—together our product support representatives, data communications analysts and customer service specialists produce the high level of service to which you are entitled.

Technology

Flexibility is inherent to the design of M&I software. Its sophisticated database architecture and definable features allow you to tailor our products to meet your specific needs. Six of the 25 largest U.S. financial institutions utilize M&I's Integrated Banking System.* This same software runs in the service bureau environment and can deliver advanced technology to you.

Commitment

For more than 20 years, M&I has been supplying the financial industry with quality data processing services. Over 400 financial institutions nationwide with assets ranging from $5 million to $6 billion receive reliable data processing services from M&I. For more information, call Joe Delgadillo, Vice President-Financial Services Group, at 1-800-558-7705 (in Wisconsin call 1-800-242-9255, extension 2529).

M&I Data Services, Inc.

*The software is developed by M&I Data Services' professional software division, Financial Computer Support.

"Nearly a third of Unisys software installations in banks and thrifts are on IBM computers, indicating the company's commitment to compatibility."

er of systems software. But it has written little applications software for financial institutions, leaving that to third-party vendors. This year, under an exclusive agreement, it started marketing the software of one such vendor — Hogan Systems — under the IBM logo. Hogan is covered separately in the survey.

Unisys, like NCR but unlike IBM, is a computer manufacturer that writes much of its own applications software. Its banking hardware, inherited from Burroughs Corp., ranges from mainframes to branch automation systems to check-processing systems. Burroughs and Sperry Corp. merged in September 1986 to form Unisys.

With about one-fifth of the banks covered in the survey as customers for its check-processing systems, Unisys ranks second behind IBM in that field. Its installations are skewed toward the lower end of the size scale.

"We have made a strong commitment to software over the years," says Jack Schlosser, program marketing manager in the Unisys financial systems division.

Nearly a third of Unisys software installations in banks and thrifts are on IBM computers, indicating the company's commitment to compatibility.

Anacomp Trails the Field

Anacomp Inc. draws the lowest rating of the software vendors, with a mean score of 2.78. Its gradual withdrawal from banking software may explain why it placed last.

The Indianapolis-based company was the pioneer in integrated banking systems, writing what it called the Comprehensive Integrated System, or CIS, that runs on IBM equipment. The software was not sufficiently tested and did not work after it was first installed in December 1983, teaching a lesson that was lost on other developers of integrated systems for banks.

To get away from banking, last year Anacomp sold its Bankserv line of transaction-processing and funds transfer products to American Management Systems Inc., Arlington, Va.; its CIS to Electronic Data Systems Corp., Dallas; and its CI/RF, or Customer Integrated/Reference File, to Michael Shade & Associates, Sarasota, Fla.

The bank operations officers grading Anacomp's product in the *American Banker* survey are mostly users of its consumer loan software in banks with more than $2 billion in deposits.

What is surprising, in view of the large number of installations it has done this year, is the next-to-last position of Automated Financial Systems Inc., Exton, Pa. Its mean score is 3.14.

"If they're rating what we picked up from Shared Financial, I think that's a good rating," says James E. Greenwood, president of Automated Financial.

Last March, his company acquired the Pacer line of software products from Shared Financial Systems Inc., Dallas, and started providing customer support to the 115 institutions that use them.

Reasons for Low Score

Mr. Greenwood offered other possible reasons for the low rating.

He thinks most of the Automated Financial users who responded do not have maintenance contracts with the company. They do their own upgrades and modifications to the software. "It's very difficult to judge a support structure if it's not provided," he says.

Also, he believes that the senior operations officers polled in this survey are typically involved more with demand-deposit account systems than with commercial loan systems, which are Automated Financial's main product line. "Senior operations officers may not work on the package," says Mr. Greenwood.

The company has been installing the AFS Level III Lending System on IBM mainframes at large banks. Mr. Greenwood says Wells Fargo Bank, San Francisco, told him the system saved his company $3.5 million a year. ■

ETERNITY, QUEBEC, CANADA POP 1,117

FROM HERE TO ETERNITY IN EIGHTEEN SECONDS.

NEW YORK, 10:30 A.M.

© 1987 Sharp Electronics Corp.

Sharp's new fax expands your business world by bringing it closer together, no matter where you are.

Because where there's a phone, there's a way. Even in isolated Eternity (pop. 1,117), where some businessmen claim they're so backwoods that sunshine has to be faxed in.

INTRODUCING SHARP'S NEW FO-210 FAX MACHINE.

Within seconds, the Fax FO-210 transmits copies of letters, diagrams, charts, virtually anything you can put on paper, to one office or a hundred. It includes a full featured built-in phone. And it's the only fax in its class that can send clear copies of photos around the world.

Once you've used it, you'll find that the FO-210 is just as basic to your office as a typewriter or copier.

No matter what your business needs—from automatic dialing to storing and forwarding—there's a full line of facsimile machines at Sharp, the fastest growing fax company in the industry.

ETERNITY, QUEBEC, 10:30 A.M.

SHARP.
FROM SHARP MINDS COME SHARP PRODUCTS™

Sales Reps Get Straight Cs From Their Bank Clients

Those who get good grades get them for knowing their product line well

BY DAVID O. TYSON

Bank operations officers do not think especially highly of the salespeople that hardware and software vendors send around to peddle their wares.

Some of them may have graduated *summa cum laude.* But as a group the sales representatives get only passing grades from the senior operations officers of middle-size and large-size banks and thrifts who were polled in the *American Banker's* first annual technology survey.

Results show the overall impression of the sales representatives is favorable among 35% of the bankers and unfavorable among 26%. The remaining 39% are neutral or have mixed views, so apathy wins.

The main reason given for favorable impressions of sales reps is their knowledge of their own products and services. The main reason for unfavorable impressions is the greater interest the hawkers show in selling than in fulfilling a bank's needs.

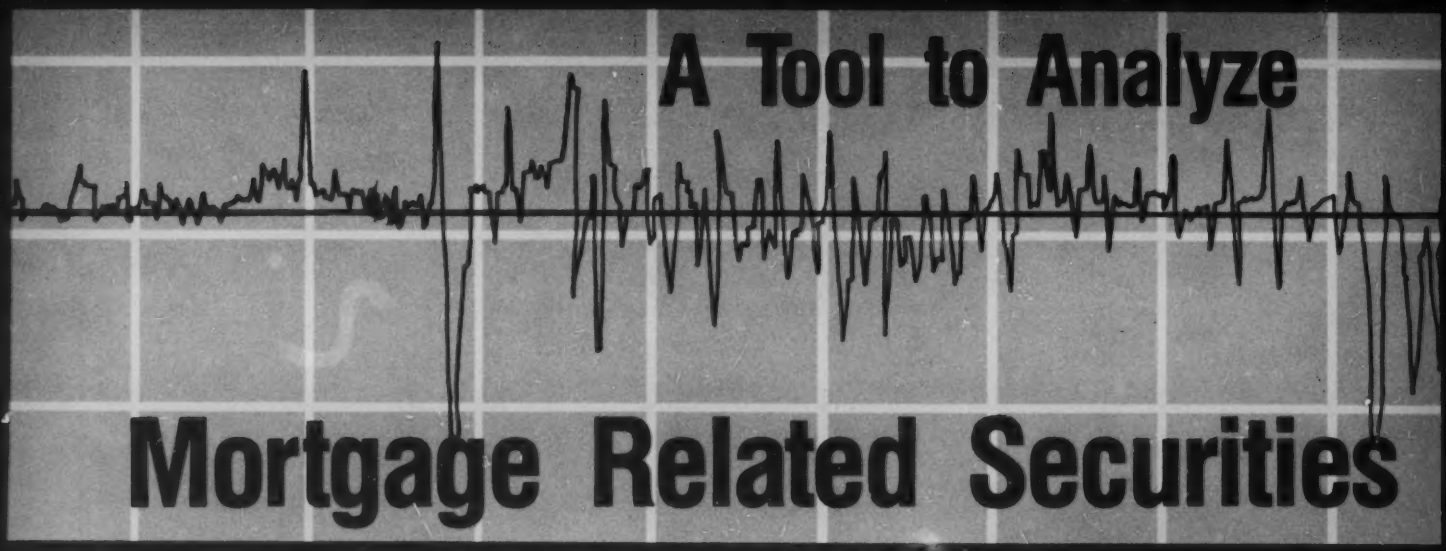
But even knowledge of products, the most ingratiating characteristic, gets an overall score not far above the satisfactory level. On a scale of 1 for poor to 3 for acceptable to 5 for excellent, the mean rating for product knowledge is 3.5. It is listed with the other capabilities in the accompanying table, "Aptitude Test for Sales Reps."

There the scores range down to 2.83, the mean for the sales representatives' commitment to helping the operations officer identify the most cost-effective and overall best solution for the institution.

On the question of commitment, not a single operations officer in a bank with $2 billion or more in deposits gives a top rating of 5. The mean score on the commitment factor among those banks is 2.42, between fair and acceptable.

Generally, the bigger the institution, the more scornful the operations officers are of sales representatives.

Thus in prompt and effective follow-



A Tool to Analyze Mortgage Related Securities

- Estimates return on investment of potential purchases.
- Measures sensitivity of return to changing interest rate and prepayment assumptions.
- Builds data base of currently owned securities and potential purchases, extracts and analyzes subsets for possible transactions.
- Evaluates horizon risk by portraying reduction in return associated with early sale in adverse interest rate environments.
- Improves acquisition analysis by evaluating the mortgage related portfolios of target institutions.
- Assist design of derivative securities and observation of their potential return and sensitivity.
- Utilizes book value and projected prepayments to amortize premiums and accrete discounts on a level yield basis.
- Interfaces with Sendero's Level III Asset/Liability Management Model for evaluation of your institution's overall rate risk.

The Mortgage Analyzer is a microcomputer-based financial model for use as an investment decision aid in evaluating mortgage related securities under multiple interest rate scenarios. It integrates prepayment assumptions that vary monthly with rate scenarios and the age of the instrument.

AVAILABLE EARLY 1988

The Mortgage Analyzer

Primary Tool for the Secondary Mortgage Market

Sendero is the world's largest company whose only business is financial modeling software and education for improving bottom-line performance through better evaluation and management of interest rate risk.

To learn more about The Mortgage Analyzer or any of Sendero's other products and services, please fill out and return the information request form or call Gary Markle at our headquarters 602/941-8112.

Please send me information on Sendero's:
- ☐ Mortgage Analyzer
- ☐ Asset/Liability software models
- ☐ Asset/Liability education courses
- ☐ Asset/Liability videotape programs

Name _____ Title _____

Institution _____

Address _____

City _____ State _____ Zip _____

Sendero Corporation
6900 East Camelback Road, 3rd Floor
Scottsdale, AZ 85251 602/941-8112

ABTS-88

Sendero® CORPORATION — A FISERV Company

Offices in New York, Cleveland, Milwaukee, Scottsdale and London with distributors in major cities in the U.S. and Canada.

Aptitude Test for Sales Reps

Mean scores on a scale of 1 to 5
Knowledge of own products and services 3.50
Prompt, effective follow-up to requests and questions 3.23
Knowledge of bank systems, equipment, software 3.16
Ability to make decisions, negotiate contracts 3.06
Knowledge of institution's hardware/software needs 3.03
Commitment to helping identify most cost effective, best solutions for institution 2.83
Source: American Banker Technology Survey 1987

> "Some of them may have graduated *summa cum laude*. But as a group the sales representatives get only passing grades from senior operations officers."

up to requests and questions, salespeople rate 3.23 overall, but 3.16 by the biggest banks. For knowledge of bank systems, equipment, and software, they rate 3.16 overall and 3.03 from the big banks. And for ability to make decisions and negotiate contracts, the score is 3.06 overall and 2.86 from the big banks.

The Three Majors

Among the three major hardware vendors — International Business Machines Corp., Unisys Corp., and NCR Corp. — the Unisys sales force gets the best marks (see the chart, "Rating the Sales Vendors' Reps"). Beyond the three majors, results for hardware vendors are too few to be statistically significant.

Unisys calling officers get a higher rating than their two principal competitors in all six categories except one, helping identify the best solutions. In that category, NCR comes out ahead with a 3.32 mean score, followed by Unisys with 2.95 and IBM with 2.73.

IBM trails in all six categories except one: prompt and effective follow-up to requests and questions. In that category it scores second, with a mean rating of 3.19.

That Unisys sales reps outscore their adversaries on most factors is the payoff of company training policy, according to Jack Schlosser, program marketing director of the financial systems division, in a telephone interview.

"We put a lot of effort into training our people, both in our system and in teaching them the industry as well, so they can be prepared to help bankers make decisions and offer them alternative solutions," he says.

But in this contest, no score is higher than the mean rating of 3.61 that Unisys received for their sales reps' knowledge of their own products.

In one follow-up question, the operations officers were asked why they had a favorable impression of hardware and software sales reps that call on their institutions. In another, they were asked why they had an unfavorable impression.

Two reasons for a favorable impression are cited by nearly half of the bankers. They say such salespeople are knowledgeable of their products and of the bank's needs. And they say the reps are considerate of the banks' best interests.

About one-tenth of the bankers say they get a favorable impression if the calling officers are professional.

As for the reasons for an unfavorable impression, more than a third of the bankers — and an even greater proportion of thrift executives — cite sales representatives' greater interest in selling than in fulfilling the institution's needs.

Lack of knowledge of the banks' needs is cited by nearly one-fifth of the operations executives. So is unfamiliarity with the products being sold.

A small minority responds, "Don't like anyone to call on me." ■

Trio Sings Praises of Digital Equipment

Digital Equipment Corp., International Business Machines Corporation's stiffest competitor in minicomputers, ranks high in the opinion of the three institutions in the *American Banker's* first annual technology survey that use its hardware for their primary computers.

Although Trans Data Corp., which conducted the survey, identifies none of the respondents, two of the Digital Equipment users, a bank and a thrift, have deposits of$750 million to $2 billion. The third is a thrift with deposits of $250 million to $750 million.

Because the survey sample contains so few institutions using Digital Equipment computers, the statistical significance of responses is open to question. But the responses are consistent in most cases.

For example, the officers polled at all three institutions voted "excellent" when asked to rate their Digital computers in terms of overall satisfaction. That's consistency. The standard deviation is zero.

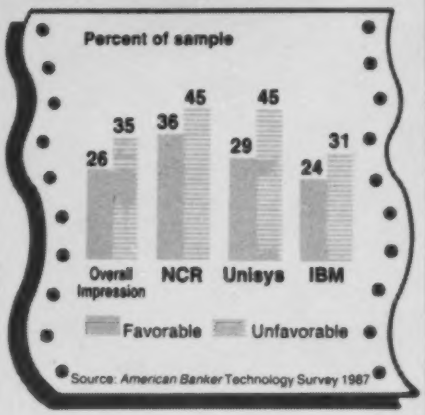
They said excellent unanimously again in rating vendor maintenance and service.

On all other factors but two, one institution gives a good rating and two say excellent. On software availability and vendor software support, two say good and one says excellent. And on the question of price, one says excellent, one good, and one average.

But the Digital users think less of Digital's sales representatives than they do of the company's equipment and support. All three were neutral or had mixed views when asked about their overall impression of the reps.

— D.O.T.

Banks' Impressions of Vendors' Sales Representatives



VOICE OF THE BANKER

"SO MANY OF THE SALES REPRESENTATIVES HAVE NO BACKGROUND IN THE PRODUCTS THEY'RE SELLING. THEY'RE COLLEGE-EDUCATED, BUT HAVE NO EXPERIENCE."

— Data processing manager from Tennessee bank

"IT'S LIKE BUYING A CAR. ALL THEY WANT TO DO IS SELL YOU THE CAR. SO, YOU LISTEN AND MAKE YOUR DECISION."

— Assistant vice president from Ohio bank

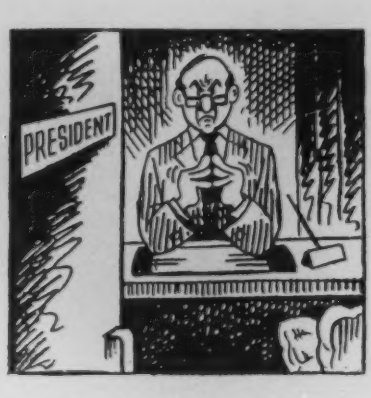
"SOME SALES REPRESENTATIVES ARE EXPERTS AND KNOW THEIR PRODUCTS AND COMPETITION, BUT YOU ALSO FIND THE EXTREME OPPOSITE. THERE IS NO CONSISTENCY WITH THE SIZE OF THE COMPANY."

— Vice president of management information systems from Georgia bank

"THE SALES REPRESENTATIVES ARE ONLY INTERESTED IN SELLING THEIR PRODUCTS, NOT THE USERS' NEEDS. MOST OF THEM KNOW JUST ENOUGH TO BE DANGEROUS."

— Vice president of operations from Texas bank

RECOGNIZE THE ROCK? HOW ABOUT THE HARD PLACE?

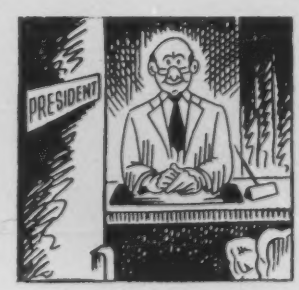


Your bank's commercial customers are demanding cash management services. Your President is screaming about the operating costs. And you're stuck with an expensive time-sharing vendor.

DISC ACCESS is your in-house solution.

DISC ACCESS is today's most advanced in-house software system to process your cash management services. It's also a turnkey system that generates substantial profits for your bank and *pays for itself in less than 2 years.* Best of all, it's totally at your command.

You control the services for your customers. You set the fees. You manage the levels of security. And *you ensure the solid banking ties that keep your clients loyal* — today and in years to come.



Completely operational in 30 days, DISC ACCESS is the "electronic window" to your bank that gives you the power to provide such *on-line* services as:

- Balance Reporting (Including intra-day and multi-bank)
- Deposit Reporting/Cash Concentration
- Money Transfer and ACH Initiations
- Stop Payment (Interfaces directly with your DISC ARP system or any other reconcilement system)
- Electronic Mail
- Controlled Disbursement

And your customers only need a PC, touch-tone phone or terminal to "talk" to your DISC ACCESS system.

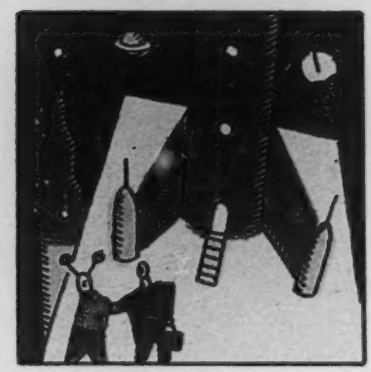
So, if you're stuck between a rock and a hard place, contact Joe Spatarella at DISC. He'll be glad to give you all the details about DISC ACCESS.

DISC ACCESS PRODUCTS GROUP

DISC, Inc.
1314 Bedford Avenue
Baltimore, Maryland 21208
(301) 486-0410
An AGS Company

For all UNIX systems. Coming 1st quarter 1988. IBM 9370 Version.

The Future



Banks are pessimistic about technological breakthroughs ♦ Desktop publishing, automated voice response systems and 24-hour global trading systems have a bright future ♦ The outlook for home banking is grim ♦ One-third of the nation's bankers are uncertain about smart cards ♦ Within the next five years debit and credit will merge ♦ Video kiosks will deliver financial information, but not take the place of humans.

Bankers Resist Siren Call Of Sexy New Technologies

Only those systems that have proven practical advantage are being adopted

BY YVETTE D. KANTROW

Banks do not invest in technology for technology's sake.

Most bankers keep abreast of new technological developments. But they are generally pessimistic about the ability of highly touted breakthroughs to improve their daily operations.

This is one of the findings in *American Banker*'s first annual survey of technology. Bankers were asked to predict whether or not nine different new technologies would emerge as staples of the banking industry within the next five years. The results make clear that bankers strive for the leading edge, not the bleeding edge, of technology.

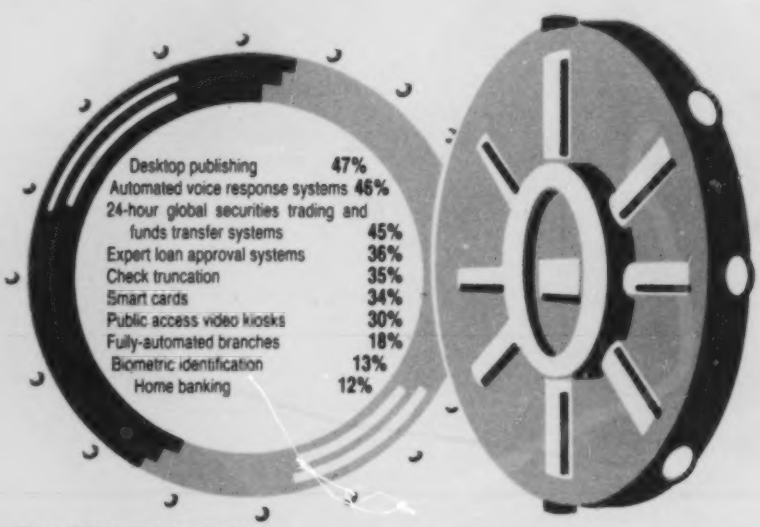
Out of nine technologies, only three — desktop publishing, automated voice response systems for customer service, and 24-hour global trading systems — are considered likely to be in widespread use in the opinion of over 40% of the survey's 187 commercial bank respondents.

Overall, the results indicate that bankers are attracted to technologies that can help them operate more efficiently, and increasingly, those that can improve customer service. However, bankers are putting less emphasis on high-tech, consumer-oriented products that require major marketing efforts to promote. Other results show the following:

- More than one-third of the nation's bankers think expert loan approval systems will be in widespread use within five years. Another third say check "truncation," or keeping checks at the bank rather than returning them to customers, will become an integral part of the check-processing system.
- Smart cards remain a source of confusion for many bankers, with 34% of the sample undecided as to the future of this technology. Another 34%, however, say smart cards may replace traditional credit cards within the next five years.
- Public-access video kiosks are also likely to be in widespread use at banks, 30% say. But only 18% of respondents say fully automated, unstaffed branches are likely to catch on.
- Other appealing new consumer-oriented technologies are probably not included in many banks' automation plans. Only 13% of those polled say biometric identification will be widely used within the next five years.
- The future of home banking looks grim, with only 12% believing it will take off.
- Thrift executives differ little from their brethren at commercial banks in their views on emerging technologies .

What's in Store for the Future

Almost half of the nation's bankers say desktop publishing and automated voice response systems are likely to be in widespread use within the next five years.


Desktop publishing 47%
Automated voice response systems 46%
24-hour global securities trading and funds transfer systems 45%
Expert loan approval systems 36%
Check truncation 35%
Smart cards 34%
Public access video kiosks 30%
Fully-automated branches 18%
Biometric identification 13%
Home banking 12%

Base: 187 commercial banks
Source: *American Banker* Technology Survey 1987

Yvette D. Kantrow is an American Banker *reporter in New York.*

When it comes to progressive banking, Delaware legislators really have their acts together.

As a result, you'll find Delaware banking legislation among the most advanced in the nation. So advanced, in fact, we've removed usury ceilings and established a regressive bank franchise tax as low as 2.7%. We've created more advantages for all banking operations in Delaware by allowing broader powers for dealing in securities. We've even expanded the opportunity for interstate banking.

Our laws, however, are not the only example of our innovative approach to business. Delaware offers an accessible state government, which allows decisions to be made quickly and fairly and information easy to obtain. Plus, a growing, productive labor force, and a strategic location.

So if you think you might want to locate in a state where legislators really have their acts together, call (302) 736-4271 and discuss it with Carolyn DePew of the Delaware Development Office. She'll tell you all about the progressive state your banking operations could be in.

DELAWARE
SMALL WONDER

> "Bankers are putting less emphasis on high-tech, consumer-oriented products that require major marketing efforts to promote."

The results do not vary greatly among different asset categories. Larger institutions are on the whole slightly more optimistic, but none are glaringly so.

The relatively poorer performance of the inherently sexier consumer-oriented technologies is not surprising, bankers and industry observers say. In these days of loan-loss reserves and heavy merger-and-acquisition activity, banks cannot afford to invest in technologies that may not fly.

"Banks have been applying technology to help functions internal to their organization — to improve service, to lower their costs, and to promote new products," explains David Taylor, a group executive at the Bank Administration Institute, Rolling Meadows, Ill.

"The things that require major investments, major marketing programs, or that indicate a significant change in the way banks offer products and services are just not likely to happen," Mr. Taylor says.

And this, Mr. Taylor points out, is good business sense. "I think banks are getting a little bit jaded in their view of how fast they can sell new products to their customers," he says.

Bankers, based on past experiences, have good reason to be jaded. Home banking provides an example.

It was not too long ago that videotex — the basis for home banking — shed its Buck Rogers image and emerged as a buzzword in the industry. The concept grabbed many headlines as banks across the country rolled out their home banking products. Today, most of the home banking headlines are attached to stories about banks rolling those products back in.

NCNB National Bank's home banking service was recently the subject of one such story. The Charlotte, N.C., bank discontinued its personal-computer-based bank-at-home product in October. According to Jimmy D. Froneberger, an assistant vice president, the bank gave up its two-year effort after persuading only 500 customers to sign on.

The biggest problems the bank experienced with its home banking project were high price and low demand. NCNB was charging customers $12 a month for the service to cover its various costs. In addition, like most home banking products, it required a personal computer and a modem. The number of American households that have personal computers is estimated at less than 20 million.

Elaine Bond, a senior vice president at Chase Manhattan Bank, New York, explains that home banking and other consumer-oriented technologies pose more marketing dilemmas for banks than technological ones.

"We've been making it more convenient for customers to do business with us," Ms. Bond says. "But the costs of those services are just not competitive." In the case of home banking, financial institutions have difficulty convincing consumers that the convenience is worth the price.

While Ms. Bond says that bankers may be driven away from promoting customer-oriented technologies because of high cost and low demand, they are attracted to those products that help them serve their customers better.

"There are back-office systems, such as DDA [demand deposit accounting] and accounting systems; then there are customer ones, such as cash management, automated teller machines, and home banking," she explains. "But the third category, and the one that is getting a lot of attention now, are the systems that support your customers."

According to Ms. Bond, this group of technologies — which she says falls somewhere in between back-office and customer systems — includes trading systems, on-line platform and teller terminals, and anything else that helps a bank serve its customers better. "There's a lot more focus on customer service and being able to sell and cross-sell."

Ms. Bond's suspicions are validated by the *American Banker*'s first annual survey of technology. Nearly half of the respondents say that two technologies clearly in this category — 24-hour global funds transfer and trading systems, and voice response systems — will be widely used in banking within the next five years.

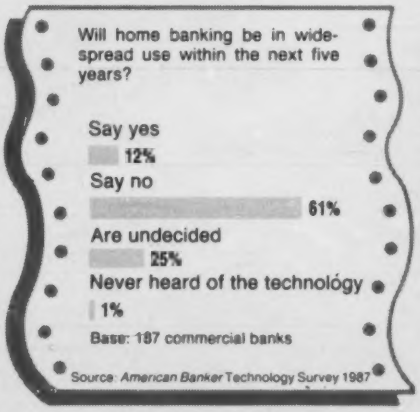
As the financial services industry continues to undergo deregulation and globalization, bankers are finding that to remain competitive, they must invest in state-of-the-art global trading systems. A study by the Wilke Organization, a New York-based communications technology consulting firm, urges banks and other financial institutions to stay abreast of trading automation.

"A floor which has not undergone a major renovation in seven years is unlikely to remain competitive in a volatile market," the report says. "It is also unlikely to attract talented, experienced traders."

Chemical Bank has apparently heeded this advice. Anthony P.R. Herriott, a senior vice president, recently said Chemical's trading room has grown from an operation that could have been equipped by electronics retailer Crazy Eddie to one out of "Star Wars."

Equipping a trader's desk costs $30,000 on average. At that price, only the largest banks can invest in high-tech trading rooms. Not surprisingly, then, this group strongly believes global trading systems will proliferate in banking during the next five years. An even 70% of the 40 respondents from banks with $2 billion or more in deposits say this is at least somewhat likely or very likely to occur.

Home Banking



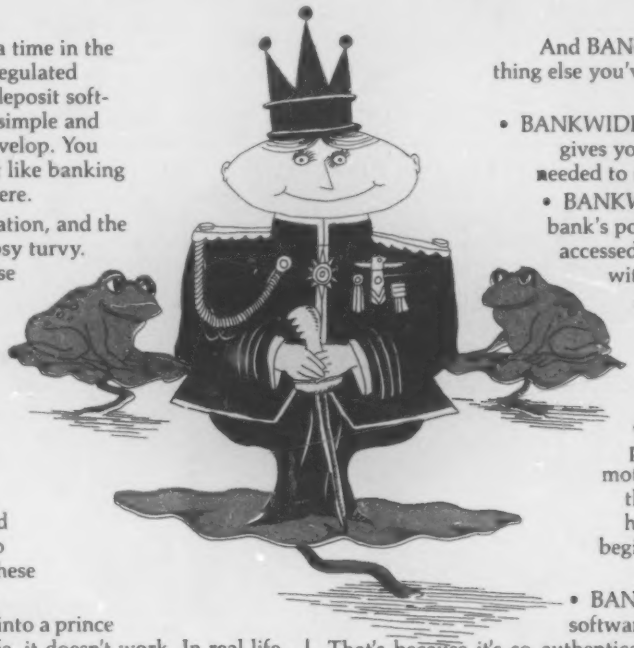
BANKWIDE: The Prince Of Deposit Software

Yes, Deposit Software That's Fully Integrated, Realtime, Interactive, and Will Work Forever . . . No Longer Is A Banking Fairy Tale.

Once upon a time in the world of regulated banking, deposit software was simple and easy to develop. You know, just like banking services were.

Then, along came deregulation, and the world of banking turned topsy turvy. Lo and behold, the need arose for software which would work well, which would be fully integrated, and which would last for a very long time before the next generation would be needed.

And it came to pass that several software developers tried very hard to create deposit systems which would meet the needs of medium to large-size banks. But, alas, these systems proved to be toads.



Now, you can turn a toad into a prince in a fairy tale. But in real life, it doesn't work. In real life, to make a prince, you have to work from princely material.

That's why we've developed BANKWIDE as deposit software that's thoroughly integrated from the inside out. As a prince through and through—not a hodgepodge of different systems that have been patched together.

No, BANKWIDE is a single, fully integrated deposit system which is capable of performing a vast array of multiple functions. Not a collection of multiple systems which function independently.

You see, BANKWIDE is integrated through a relational data base management system. This allows your entire system—demand deposits, time deposits, CDs, IRAs, pensions, money markets, and lines of credit—to share a common language and data base so each part can talk to each other easily. And so they can function as a unified whole, rather than the sum of diverse parts.

Furthermore, BANKWIDE uses a fourth generation language to give you complete on-line access to each customer's related accounts. Full relationship banking is possible only with a deposit system that's as thoroughly integrated, and interactive, as this.

And BANKWIDE is virtually everything else you've long believed to be part of banking fairy tales:

- BANKWIDE is on-line, realtime. That gives you the speed and efficiency needed to service the total customer.
- BANKWIDE is designed from the bank's point of view. The system is accessed, maintained and updated with your needs in mind. We ask how you want to analyze your products, your fee structures, your customers' needs.
- BANKWIDE is well documented and well supported. Our highly skilled, motivated staff stands behind the software. Most of them have been with us from the beginning, and they know the system inside and out.
- BANKWIDE is the last deposit software system you'll ever need. That's because it's so authentically integrated that it will quickly *become* your product, your bank.

Best of all, BANKWIDE works. It will work for your bank from the word go. You won't ever be asked to test BANKWIDE, as so many other software products are tested. That's because we've already spent five years testing it, and we're convinced BANKWIDE is ready for you now.

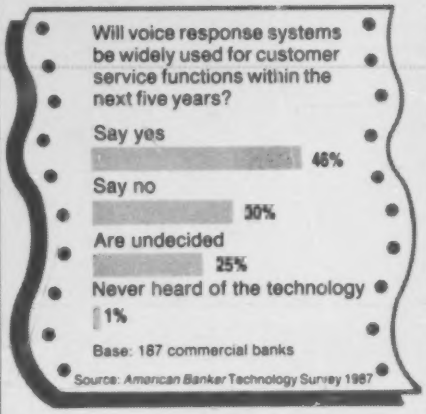
So, when you're ready to seriously consider an integrated deposit software system, prepare yourself for the reality of BANKWIDE. When you study it, analyze it, and take it apart to see how it works, you'll find the guts of a prince.

And that's no fairy tale.

Director of Marketing
Corporate Data Systems
3700 Market Street
Philadelphia, PA 19104
(215) 222-7046

CORPORATE DATA SYSTEMS

Voice Response Systems



Much of the money spent on trading systems will probably go toward streamlining information so that a number of data sources can be accessed from a single terminal. The technology involved is complex, Ms. Bond says, since it sometimes involves integrating voice and data as well as multiple sources of information.

Automated voice response systems are also finding a use in banking, allowing customers to make inquiries about account balances and interest rates, and even transfer funds among accounts by telephone, 24 hours a day.

Nearly half the respondents say these systems will be in widespread use within the next five years. At banks with $2 billion or more in deposits, that figure goes up to nearly 70%.

But according to William Czerniewicz, an executive vice president at Security Pacific Automation Co., a subsidiary of Security Pacific Corp., Los Angeles, the issue is not as cut and dried as those figures indicate.

"In niche applications, you will see [voice response systems]," he says. "But I don't know if it will be widespread."

Mr. Czerniewicz explains that local phone-line tariffs and long-distance charges can turn operating these systems into a large, unaffordable expense. The tariffs vary from state to state, so it is difficult to predict national trends, he says. Larger banks, however, may have an advantage in that they may be able to operate their own large data networks, sidestepping some communications costs.

Truncation Confusion

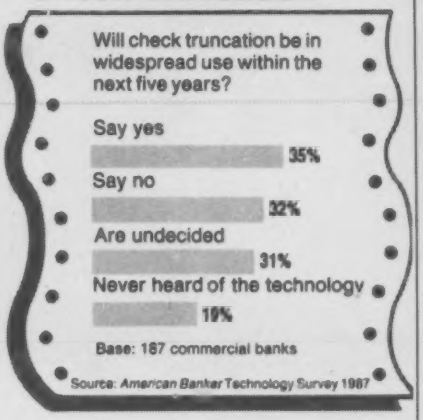
Check truncation, or safekeeping, is both a back-office technology and one that must be marketed to consumers. The process, in which checks are not physically returned to customers, remains clouded for many bankers.

Although 34% of the commercial bankers surveyed say this process is at least somewhat likely to be widespread within five years, another 31% remain undecided. For the most part, proponents of truncation say it can speed the check-collection and return-item process. Its opponents say it is hard to sell to consumers and imposes security risks.

The confusion may clear up when the Federal Reserve Board enters the picture. The Fed is charged with examining truncation under the Competitive Equality Banking Act of 1987. The law sets temporary and final funds-availability schedules and gives the Fed authority to improve the check-processing system and return items. The Fed is expected to publish proposals for comment in December.

"We're optimistic about truncation," says Jerry Keenan, an assistant vice president in charge of electronic payments at the Federal Reserve Bank of Atlanta. The Atlanta Fed is one of five Federal Reserve Banks now active in truncation. "We know it won't revolutionize the payments system or do away with checks, but it will help a migration toward an electronic payments system."■

Check Truncation



VOICE OF THE BANKER

"THE FUTURE IS THE COMBINATION OF COMPUTERIZED BANKING AND HOME BANKING. IN OTHER WORDS, GETTING RID OF THE HUMAN ELEMENT IN BANKING."

— Director of management information systems for Missouri bank

"THE ELIMINATION OF MAGNETIC DISKS AS A PRIMARY STORAGE AREA WOULD HAVE THE GREATEST IMPACT ON THE FUTURE OF TECHNOLOGY."

— Vice president of Mississippi bank

MERGING two large banks can produce significant economies of scale. It can also produce significant programming headaches if the two have different computer systems.

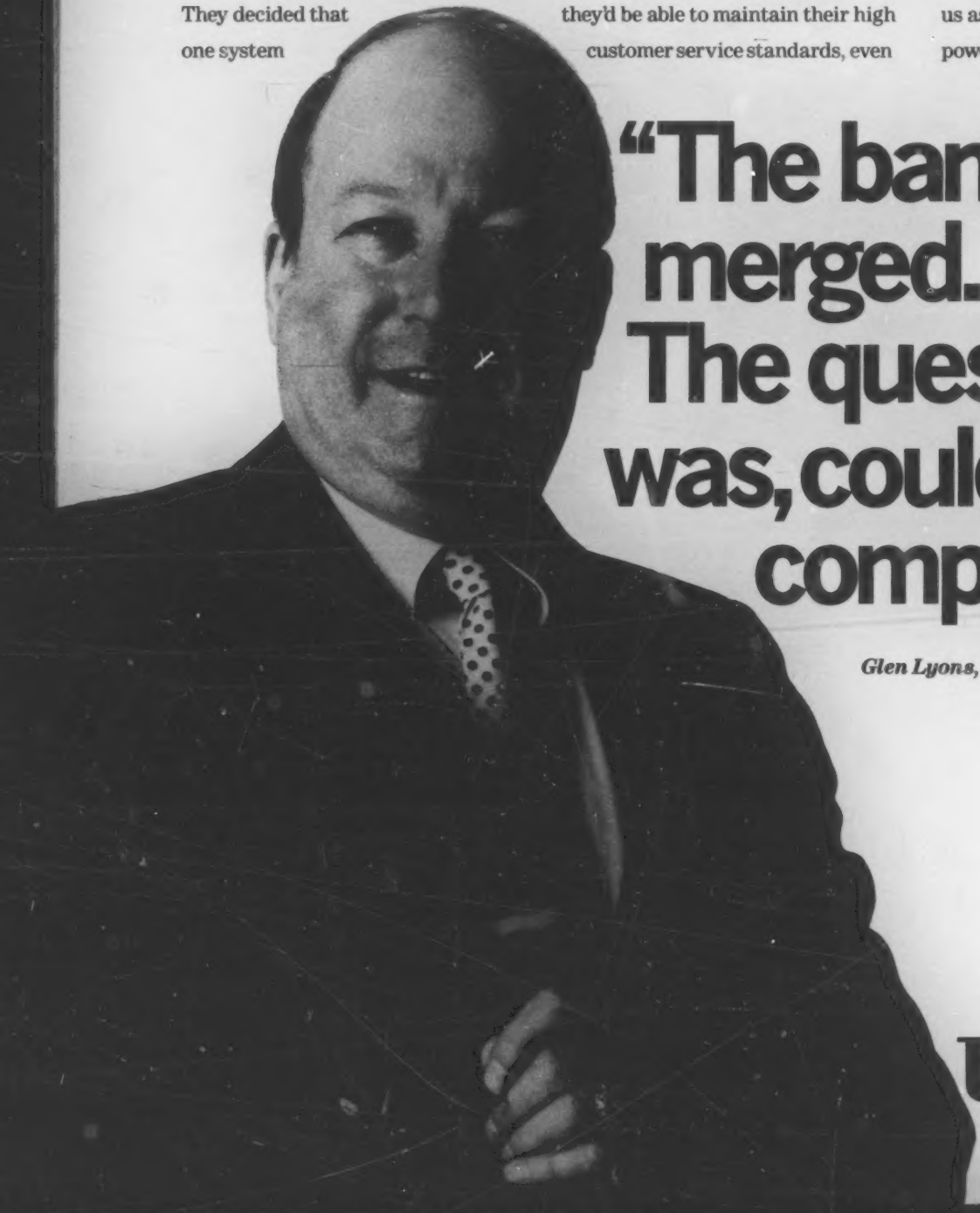
When the Bank of Virginia, a 22-year Unisys customer, merged with a Maryland bank to form Signet, the banks had to decide how to use two very different computer systems. They decided that one system would be assigned to the new organization's retail business, and the other to the commercial business.

Since Signet is strongly customer-oriented the big question was, whose equipment was going to handle the retail business?

"The bank has always cared a lot about their retail customers, and they expect us to as well," said Glen Lyons. "Our people showed them how they'd be able to maintain their high customer service standards, even with 90 new branches, without any interruption of service.

"They knew that we could do it. The bank has grown fast for years, and Unisys has always kept pace with them. And Signet has never had to rewrite their software.

"It's been real rewarding to work with bankers who care so much about their customers. We work with them so closely, they think of us as family now. That's really the power of 2."



"The banks merged. The question was, could their computers?"

Glen Lyons, District Manager, Unisys.

UNISYS

The power of 2

Can Debit and Credit Coexist on One Card?

Mobil Oil says yes, but the answer is not that clear-cut for bankers

BY YVETTE D. KANTROW

Consumers' wallets may soon become thinner as the amount of plastic they need to carry diminishes.

Within the next five years, many banks may start supplying their customers with single cards that can access their bank accounts through automated teller machines, pay for purchased goods at debit card point-of-sale terminals, and initiate traditional credit card transactions.

According to the *American Banker*'s first annual technology survey, more than half of the nation's operations bankers believe that a marriage of debit and credit will take place within the next five years, with the two functions typically residing on one card.

Two major petroleum retailers have already caught on to this trend. Exxon Company U.S.A. and Mobil Oil Corp. give millions of their own customers the choice of declaring either debit or credit when they present a card at the point of purchase.

But interviews with bankers and consultants involved in the credit card industry reveal that for bankers the issue is still controversial. Combining the two functions can result in a turf war between bankers groomed in a strict credit card environment and those exclusively devoted to debit cards.

"This really isn't a technological question, but a question of credit card companies making agreements with merchants and cardholders," explains Larry F. Linden, former head of plastic card manufacturer Thorn EMI Malco Inc. and now a Washington-based consultant to the industry.

Paul F.P. Coenen, president of Electronic Strategy Associates, Atlanta, is one of the concept's supporters. "As bank services become more homogeneous, you will see aggressive banks present products in different ways," he says, and that includes issuing a single, all-purpose card. In fact, Mr. Coenen points out that several banks have already released such a product, hoping that it will prove to be a strong competitive tool.

But others say the merger of the two functions is impractical and undesirable. Among this constituency is John Fisher, senior vice president at Banc One, Columbus, Ohio. "In the marketplace today, it's often a case of the more cards the merrier," explains the oft-quoted marketing chief.

Mr. Fisher, however, says he favors debit cards that consumers can use in ATMs and at merchants that may or may not have electronic funds transfer terminals.

A merger of debit and credit is very likely to occur, say nearly 37% of 187 executives in charge of technology at commercial banks with deposits of $250 million or more. An additional 22% say such an event is somewhat likely.

Technology managers at the nation's biggest commercial banks react even more positively than their counterparts at smaller banks. Among the 40 bankers at institutions with $2 billion or more in deposits who responded to the survey, 48% say it is very likely the functions will be merged within the next five years. Another 17% say a merger is somewhat likely.

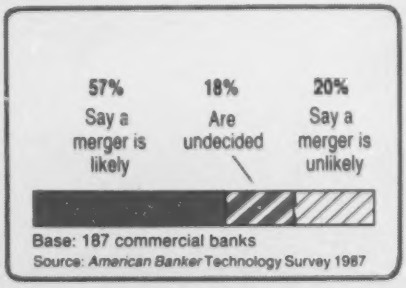
Thrift automation executives also predict that combining these functions on one card may soon be a trend. Among 187 respondents from thrifts, 29% say a merger is very likely to occur, and 27% say it is somewhat likely. At the nation's largest thrifts — those with more than $2 billion in deposits — 33% predict a merger is likely, and 30% say it is somewhat likely.

Reg E Changes Smooth the Way

Truman Porter, a vice president at Midway National Bank, St. Paul, calls combining debit and credit functions "a heck of a service." The bank is preparing

The Marriage of Debit and Credit

A majority of bankers believe debit and credit functions will be merged on the same card within the next five years.



Base: 187 commercial banks
Source: *American Banker* Technology Survey 1987

FASB 91 Fees Now Supported by Loan Accounting Package. . .

The Loan Administrator™ has the capability to process almost any loan situation imaginable! Whether it's commercial, line of credit, installment, mortgage or construction, this complete package will give you the detailed billing, accruals and management reports to effectively handle your most complex portfolios. Plus, with your choice of methods, fees can now be deferred and accrued under the new FASB regulations.

The Loan Administrator will run on the **IBM PC** and compatibles, on local area networks and on most mini-computers. Thus, growing portfolios from 20 to 20,000 loans are easily managed with your investment protected.

Those with more detailed construction loan accounting needs may add our **Construction Loan** module to The Loan Administrator for the added dimension of project management with budgeting and disbursement of funds within user defined projects, units and sub-unit categories with full A.I.A. reporting.

The Reporter, our report generator option, allows the user to define and print custom reports from data on any of the loan files. Custom output can be sent to a disk file as well for updating other computer systems.

Features	Reports
• Detailed Billing	• Accrual with Participations
• Separate Other Fees and Escrow Balances	• Detail Trial Balance
• Unlimited Base Rates	• New Loan and Maturity
• Flexible Interest Calculations	• Aged Delinquency
• Complete Participation Accounting	• Forecast and Yield Analysis
• Full Audit Trail & Collateral Tracking	• Cost of Funds
• On-screen or Hardcopy History	• Collateral Margin and Inventory
• General Ledger Interface & Tickler System	• Static Change Journal for Audit
• Help Windows	• Amortization Schedules
• Fast 'C' Language Compiled Code	• Custom Reports with The Reporter
• Construction Management	• Construction Reporting

For a free brochure and demo disk call us at ***1-800-PSC-FREE***

PSC

Precision Software Corporation

The Atrium Building
263 McLaws Circle
Williamsburg, Virginia 23185

800-772-3733 or 804-229-4433

> "Combining the two functions can result in a turf war between bankers groomed in a strict credit card environment and those exclusively devoted to debit cards."

to release a dual-function card next year.

Mr. Porter predicts that the Federal Reserve Board's recent liberalization of Regulation E — the vehicle through which the Fed enforces the Electronic Funds Transfer Act of 1978 — will further fuel the trend to place debit and credit functions on a single card.

The new Reg E amendments permit supermarkets and other retail merchants to operate electronic funds transfer systems without having to send monthly statements to consumers.

As a result, more retailers will be issuing debit cards. And, according to Mr. Porter, many of those cards will perform credit functions as well.

As for Midway National, Mr. Porter explains that the bank made the decision to offer a combined card years ago. "We feel the consumer can make the decision, and the retailer can make the distinction between the two transactions," he says. But Mr. Fisher of Banc One argues that few merchants have terminals in place that allow users to indicate what type of transaction they prefer.

Midway National's planned product will be more than a payments card, Mr. Porter says. The bank is working on technology that will allow the card to access not only credit and debit transaction data bases, but medical and educational data bases as well.

The strategy is to offer what Mr. Porter characterizes as an identification card that consumers can use to perform a wide variety of functions, both financial and nonfinancial. The card may or may not bear Midway National's name, he says.

The bank is not a stranger to using electronic funds transfer terminals for nontraditional transactions. It was in the news last summer, when Ramsey County, Minn., became the first county in the nation to distribute welfare cash benefits through point-of-sale terminals and ATMs.

Midway brought POS terminals at three retail stores into the system. The bank also maintains the program's settlement accounts and operates a telecommunications link to its processor — TransFirst Corp., a subsidiary of First Texas Financial Corp., Dallas.

The Ramsey County pilot is scheduled to end Dec. 31, when it will be reevaluated. Mr. Porter says he is confident that the county government will continue the program and expand it. He also says he expects his bank to play a role in its growth.

"The first phase of the project required cards, POS terminals, and ATMs. Now it makes sense to use the same cards and terminals for the electronic distribution of food stamps," he explains. The bank is planning to install additional terminals to accommodate those extra transactions.

The next logical step Mr. Porter predicts in this process is to bring the government's Medicaid program into the electronic system. This would require putting POS-type terminals in the offices of medical providers.

Midway National would like to play a role in placing terminals that are capable of handling all these new applications. "It makes sense that these terminals be compatible with private-sector payments systems," Mr. Porter says.

"And the card should be an identification card that has the capacity to access many different kinds of data bases, including — but not exclusively — financial ones."

Not Feasible in All Banks

At other institutions, the differing economics of credit and debit transactions remains a deterrent to issuing a dual-function card, according to Mr. Linden. "In a true debit card electronic funds transfer environment, a combined card would probably not work to the advantage of the credit card companies," he explains. "If both debit and credit functions are put on the same card, any transaction you would make would probably be a debit transaction."

Mr. Linden reasons that consumers, given the choice of both functions on one card, would probably opt for debit. Depleting bank account balances is more attractive than agreeing to pay interest for accessing credit lines, he says.

"The credit card companies are in business to make money from rolled-over dollars. They want their credit cards to be used for credit purposes. Debit is a whole other ball game," he says.

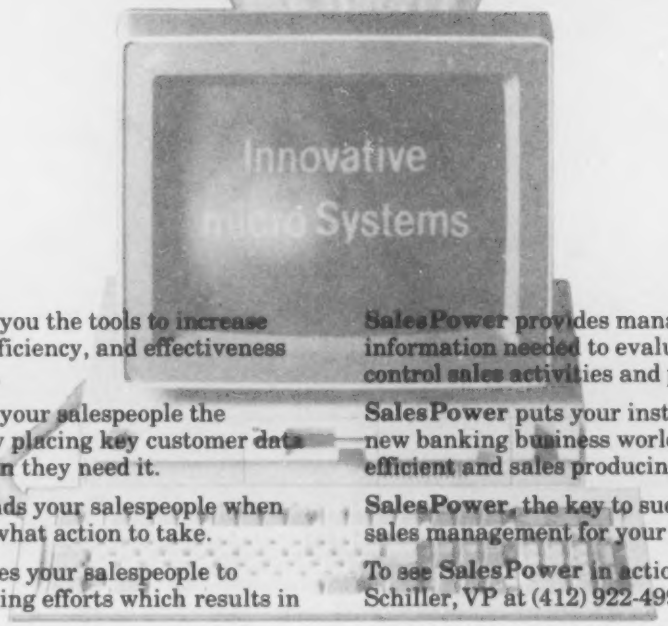
And for the most part, a less lucrative one. According to Mr. Linden, it takes hefty debit transaction volumes to justify placing terminals with a broad base of merchants. The value of debit transactions to card issuers, he explains, is hard to quantify.

For example, if American consumers wrote 25% fewer checks because of the advent of debit cards, banks would still support a tremendous check-processing overhead, and get less processing for their money to boot. "It's one hell of a dilemma," Mr. Linden says. ■

Enter the New Banking Business World with

SalesPower™

The only complete micro-based sales prospecting and support system designed *specifically* for the financial services industry.



SalesPower gives you the tools to increase the productivity, efficiency, and effectiveness of your salespeople.

SalesPower gives your salespeople the competitive edge by placing key customer data in their hands when they need it.

SalesPower reminds your salespeople when to take action and what action to take.

SalesPower enables your salespeople to maximize their selling efforts which results in increased sales.

SalesPower provides management with information needed to evaluate, instruct, and control sales activities and performance.

SalesPower puts your institution into the new banking business world in a cost effective, efficient and sales producing manner.

SalesPower, the key to successful sales and sales management for your institution.

To see **SalesPower** in action, call John Schiller, VP at (412) 922-4999 or write

INNOVATIVE microSYSTEMS
601 Holiday Drive, Pittsburgh, PA 15220-2736
(412) 922-4999

a member of The Innovative Group, Ltd.

Smart Cards Are a Gray Area For Many Bankers

The technology is not well understood, and there is the added problem of cost

BY YVETTE D. KANTROW

Chip-embedded plastic cards may be smart, but they remain a source of confusion for many bankers.

According to *American Banker*'s first annual survey of technology, more than one-third of the nation's bank operations managers are unsure of what the future holds for smart cards. But another third predict that smart cards will replace traditional credit cards within the next five years.

Smart cards are embedded with computer chips that can be programmed to store a wealth of information about cardholders. One of banking's sexier technologies, smart cards have received a good deal of attention in the press.

Their proponents say they can be a valuable resource in reducing the bank card industry's credit losses, now running $3 billion per year. But their opponents say they are too expensive. Some industry watchers point out that the well-publicized smart card debate clouds the issue for many bankers.

Asked to rate the likelihood that smart cards will replace traditional magnetic-stripe credit cards within the next five years, 34% of 187 commercial bank respondents said such an occurrence is neither likely nor unlikely. Thrift executives also displayed uncertainty, with this neutral response chosen by 28% of the 157 individuals sampled.

Technology managers at the nation's largest banks are also unsure about what the future holds for smart cards in banking. Some 35% of the 40 executives who responded at banks with more than $2 billion in deposits say the possibility of smart cards replacing traditional credit cards is neither likely nor unlikely.

"Overwhelmingly, bankers in operations are not aware of how chip cards work," says John Elliott, executive vice president of MasterCard International, New York. "The question that should be asked is, 'Do you really know enough to say whether or not it is feasible?' "

Though confusion may abound, it is tempered by optimism. More than 18% of commercial bankers say it is somewhat likely that smart cards will replace traditional cards within five years. More than 15% say this event is very likely.

Bankers at institutions with more than $2 billion in deposits react similarly, with 18% choosing "somewhat likely" and 23% "very likely" as their response. Responses from thrift executives vary little from these findings.

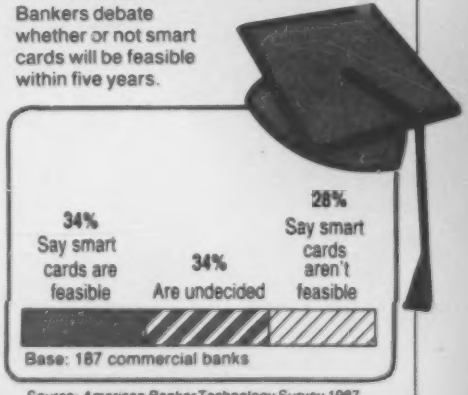
Visa, MasterCard Square Off

Smart cards have long been a subject of debate in the banking industry, with Visa and MasterCard emerging as two key polar opponents. Visa generally promotes a slower, more experimental approach, while MasterCard lobbies for quick adoption of the technology, arguing that it can bring about a payment-systems revolution.

The battle between the credit card giants has been keeping smart cards in the headlines. But, as the *American Banker*

Smarter Than Your Average Card

Bankers debate whether or not smart cards will be feasible within five years.



Source: *American Banker* Technology Survey 1987

Fujitsu.

Fujitsu's ACT 1000 cash dispenser is the reliable, cost-effective solution for off-premise applications.

The ACT 4000 lobby ATM features front or rear service, and options like color graphics and voice guidance to enhance user-friendliness.

Like all Fujitsu ATMs, the ACT 6000 through-the-wall full-function ATM is designed and tested to the industry's toughest standards.

The ACT 6100 drive-up ATM can be installed either through-the-wall or on an island. It offers easy access to drivers of vehicles from sports cars to full size pickups.

The top line for your bottom line.

FUJITSU

FUJITSU SYSTEMS OF AMERICA, INC.
12670 High Bluff Drive, San Diego, CA 92130, (619) 481-4004

survey reveals, the banking community remains confused.

In fact, confusion is one point on which both MasterCard and Visa agree. MasterCard's Mr. Elliott reports that the problem is so pressing that he recently asked the American Bankers Association to research ways of educating the banking public about chip cards.

Pino Francini, a general manager at Visa, points out that most bankers are uninformed when it comes to smart cards. For example, he says, while industry consultants are vocal as to smart cards' pluses and minuses, few bankers are ever quoted in the media. A recent smart card conference in Atlantic City drew some 400 attendees — but only a handful of bankers, he reports.

According to Mr. Francini, many bankers who are optimistic about smart cards' potential to curb credit losses are indulging in wishful thinking.

"Bank operations people are faced with losing income on fraud and credit losses. They want a magical solution, so they respond positively to a question on smart card trends," he says. "But once they look at specifics, they conclude quite quickly that credit losses cannot be affected by the chip card."

Technically, smart cards are secure and can help control credit card losses. But Larry F. Linden, a Washington-based consultant, points out that smart cards are not necessarily the answer to credit-loss problems. Most credit problems arise because people do not pay their bills — a situation smart cards can do little to change.

"Only 10% of all credit losses would be helped by smart cards," he says. "And the next Achilles' heel is the price."

Mr. Linden is the retired chairman of plastic card manufacturer Thorn EMI Malco Inc. He also believes the costs of smart card technology are prohibitive.

Not only are the cards themselves expensive, but the infrastructure needed to support them requires a hefty investment, some people argue.

For example, Mr. Linden says, smart cards derive their value from the data they can store. The cards carry enough information for terminals at retail outlets to make off-line decisions, thereby slashing communications costs.

> "Proponents of smart cards say they can be a valuable resource in reducing the bank card industry's credit losses; opponents say they are too expensive."

But actually getting the data into the cards is a slow, laborious, and expensive process. Mr. Linden estimates that the procedure could raise the cost of producing smart cards from $2 to more than $6 each.

Furthermore, in order to accept this means of payment, retailers have to be equipped with terminals capable of reading the data stored in the smart cards. That represents another substantial investment. Also clouding the issue is the difficulty of determining how much the industry can save by using smart cards.

"The assumption for reduction of credit loss is never provable," Mr. Linden says. "There is no way to say you will save X amount of dollars until a system has been in place a number of years."

The banking industry may find other uses for smart cards. According to Mr. Francini, the technology lends itself to applications that require the installation of a small number of chip-reading terminals. He suggests using the cards as a security measure in bank wire-transfer rooms.

In this application the technology's cost would be justified, Mr. Francini says. Only a few terminals would have to be installed to protect millions of dollars worth of transactions a day.

He contrasts this relatively modest equipment outlay with the scenario of replacing consumer credit cards by smart cards: Terminals would have to be installed at millions of merchant locations around the world to protect relatively small transactions.

MasterCard's Mr. Elliott, however, dismisses claims that the technology is too costly to replace traditional credit cards. "Too expensive compared to what?" he asks.

Smart cards will last three to five years longer than existing cards, he argues. Mr. Elliott claims, with tongue in cheek, that comparing the costs of chip cards with magnetic-stripe cards is like comparing the costs of two-wheel cars with four-wheel cars.

Visa's Cautious Approach

The MasterCard-Visa debate has received further attention in recent months with Visa's release of research it commissioned showing that most bankers downplay smart cards. Visa, based in San Mateo, Calif., asked Payment Systems Inc. of Tampa, Fla., to conduct a poll of credit card bankers.

Of 46 top credit card bankers surveyed, 85% said smart cards will not be viable within three years, and 35% said their cost will never be justified.

Based on these findings, Visa has recommended that its member institutions experiment with smart cards — but not get locked into them prematurely. The association contends that other measures, such as updating data bases for authorizing transactions, promise a more certain return than smart cards.

MasterCard, however, wants to adopt smart cards as a global standard for credit cards now — following two years of testing in Florida and Maryland. "The banking industry has to face up to the fact that the 1970s were different from the 1960s, and the 1990s will be different from the 1980s," Mr. Elliott says.

He predicts that smart cards will be part of that difference. Visa also agrees, however, that other measures for controlling credit card losses should be investigated. ■

ACCESS CULLINET SOFTWARE FOR BANKING. BANK OF BOSTON DID.

"We at Bank of Boston are putting our strength to work for clients everywhere. And Cullinet's integrated information management system is definitely one of those strengths. Cullinet's support people appear dedicated to our needs, going beyond normal procedures to help us expand not only the use, but the success of all kinds of applications."

John C. Martin
Director of Eagle Information Technologies, Bank of Boston

As the spread narrows between what money costs and what it can buy, the need for real-time relationship banking has increased accordingly.

That's why Bank of Boston chose Cullinet software – a fully integrated set of decision support and analysis tools based on IDMS/R, Cullinet's high-performance relational database. Cullinet software allows employees throughout the Bank to gain direct on-line access to a wealth of up-to-the-minute data – including data on electronic banking, assets, liabilities, customer profiles and portfolio management. So the Bank can now make more informed decisions more rapidly.

In order to keep its huge international operation competitive, Bank of Boston has called upon the inherent benefits of Cullinet's three-level integration of database, advanced development tools and end-user applications solutions. ADS/OnLine, IDMS/R's versatile fourth-generation programming language, has allowed development of a corporate banking and commercial lending system that delivers a unique client-based view of worldwide activity. And the Shareholders Service Division used IDMS/R to develop a new corporate stock transfer system. Whenever the Bank calls on Cullinet's comprehensive software solutions, the improvements come right down to the bottom line.

For more information on how your bank can access Cullinet, call toll-free 1-800-551-4555. Or write to Cullinet Software, Inc., 400 Blue Hill Drive, Westwood, MA 02090-2198.

Cullinet

An Information Technology Integrator
For The 80s, 90s And Beyond.

Machines Won't Displace People in Banks of the Future

Technologies such as interactive video are supplementing, not supplanting, workers

BY YVETTE D. KANTROW

Self-service video banking machines may soon be an integral part of many bank branches. But they will not take the place of branch personnel.

Nearly one-third of the nation's bank operations executives say it is probable that public-access video kiosks will be widely used to deliver consumer financial services in the next five years, according to *American Banker*'s first annual survey of technology.

But less than one-fifth say that fully automated, unstaffed branches are likely to become a reality within the same five-year period.

The technology used for public-access machines — interactive video — has been cautiously embraced by retail bankers. The machines are showing up in bank branches. Mixing video images, text, and graphics on one screen, they supply customers with bank products and general information, financial modeling capabilities, and transaction processing.

The video screens are also being deployed outside the branches, giving banks a high-tech presence in areas such as shopping malls. But, as the survey results indicate, bankers are still unsure whether the machines can help bridge the gap between branches and their customers.

For example, 23% of the 187 bankers questioned say the proliferation of public-access video machines in banking is somewhat likely; another 7% say it is very likely.

But slightly more than a third say the machines will probably not be in widespread use; 8% of the sample believe this strongly, and 30% somewhat strongly. The 157 thrift executives responded similarly.

Larger banks — those with more than $2 billion in deposits — are perhaps more willing or more financially able to experiment with this technology than the general sample. Of the 40 bankers in the larger-bank category, 32% say the video terminals are somewhat likely to be in widespread use within five years. Another 3% say this scenario is very likely.

Overall results indicate that bankers are curious about video banking machines. This interest is shared by consumers. *American Banker*'s fourth annual survey on consumer attitudes about the financial services industry, conducted last spring, reveals that bank customers are also curious about the technology.

Given a choice, more than 7 out of 10 consumers surveyed say they would prefer to interact with humans rather than machines for transactions such as getting account statements, ordering checks, and researching financial services. At the same time, 47% say they definitely would, probably would, or might use self-service banking machines for those transactions.

With their high-tech gloss, interactive video machines conjure up images of unstaffed, fully automated branches of the future. But according to the *American Banker* technology survey, it is unlikely that unstaffed branches will become part of the banking landscape.

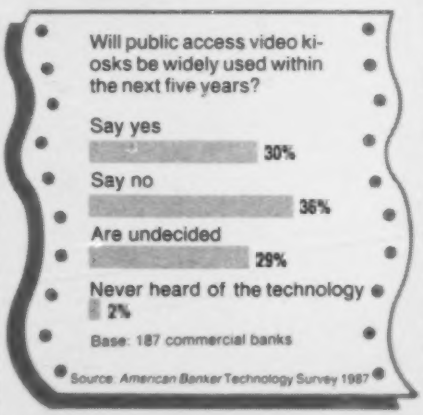
In fact, 60% of the sample say that fully automated branches are unlikely to proliferate; 34% say unstaffed branches are very unlikely, and 26% say they are somewhat unlikely.

The bigger banks are slightly more optimistic than the general sample: 35% of bankers at institutions with more than $2 billion in deposits say that fully automated branches are unlikely to appear within the next five years. Another 32% of this group say they are at least somewhat likely to crop up.

"Technology doesn't replace people; it's a tool you use with people," says Robin Shaw, an assistant vice president at Connecticut National Bank. "Technology demands that people be more knowledgeable."

Still, to the dismay of many bankers,

Self-Service Video Banking



Opportunity.

There are worlds of opportunity to exploit in international trade services — if you can compete as a *low-cost* supplier of *value-added* service. Our software products and consulting services provide you with exactly that competitive advantage.

You benefit as a low-cost supplier by structuring your organization around the needs of your customers to provide service with efficiency, control, and high staff productivity — with increases often in excess of 150%.

You enhance your organization with our software, proven as the most capable, flexible, and cost-effective — the Trade Services Processing System™.

Handcrafted Nesting Eggs, Holland

You benefit as a value-added supplier by delivering rapid, personalized, and high quality service — building customer loyalty. You extend your value by providing customers with the most advanced microcomputer software to meet their trade services transaction and information needs — The Customer Connection™.

Our clients, both large and small, are achieving substantial market success — all with our established and fully integrated software products.

You can exploit the worlds of opportunity in international trade services. For more information on how we can help you achieve business success, please call Tim Bosworth in the United States at...

(413) 458-8072

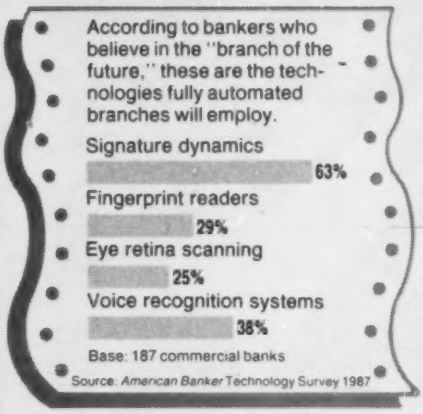
digital™ Cooperative Marketing Program

Cibar

Software for a Business Advantage

Telefax: (413) 458-8024 Telex: 510-6018672 CIBAR UQ

Emerging Technologies


According to bankers who believe in the "branch of the future," these are the technologies fully automated branches will employ.
Signature dynamics
63%
Fingerprint readers
29%
Eye retina scanning
25%
Voice recognition systems
38%
Base: 187 commercial banks
Source: American Banker Technology Survey 1987

the phrase "branch of the future" is quickly becoming a cliche. It is "poor nomenclature that conjures up images of robots," according to John Fisher, one of the pioneers of interactive video banking. He is senior vice president at Banc One Corp., Columbus, Ohio.

"The branch of the future is not under way," Mr. Fisher says. "Our experience has been to revitalize existing branches, and that modernization effort includes several technologies. Interactive video is just one aspect of the revitalization under way."

Banc One is experimenting with various types of automated teller machines placed within branches, so that any one branch might boast drive-throughs, lobby machines, and outdoor through-the-wall machines.

Mr. Fisher stresses that branch revitalization is not a process of replacing people with machines. Rather, one of its aims is to apply technology so that branch employees are better equipped to handle their clients' requests.

Revitalization includes supporting massive customer-information files that can be easily accessed at the branch through personal computers. "We want to be able to provide customer service reps with better information so they can handle new account needs," he says.

Mr. Fisher sees bank branches evolving into more than distributors of lending and depositing services. Travel, brokerage, insurance, and real estate are some of the services that he envisions being supplied at the nation's 34,000 branch offices.

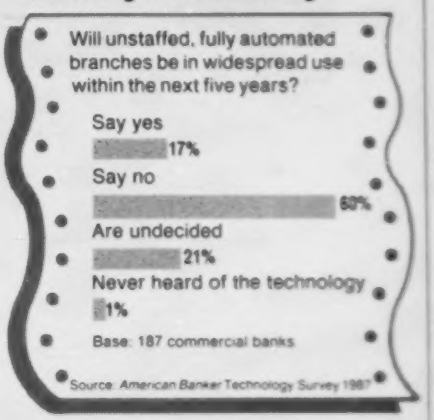
Connecticut National Bank, Hartford, is already moving in this direction. The bank took an early stab at interactive video in 1985.

That program, which placed interactive terminals in four branches, was less than a smash hit. Usage volumes were low, and the bank had problems integrating the technology with its branch personnel.

Today, according to Ms. Shaw, Connecticut National is using video terminals to help position itself as an overall information provider. The bank is now piloting Home Visions — a project designed to help people relocating to the Hartford area choose the community in which they want to live.

A Connecticut National branch in East Hartford boasts a Home Visions center

Branch of the Future — Reality or Fantasy?



— four video terminals, plus a banker with real estate experience who is available to answer customer inquiries and provide more information on the neighborhoods covered in the system.

Although the center is open to the public, most visitors come by appointment, with their real estate agents.

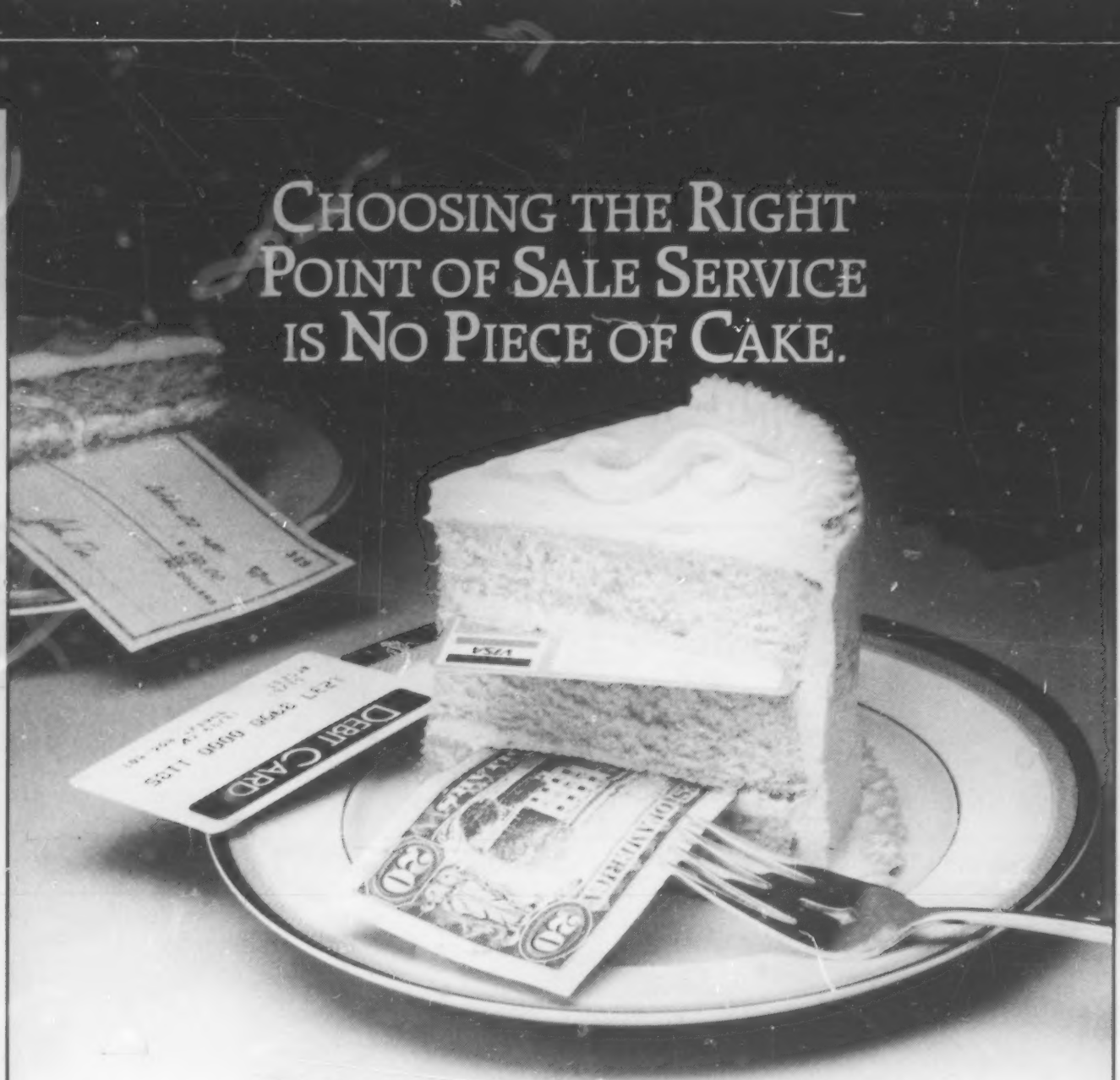
It is too early to gauge the success of Home Visions, Ms. Shaw says. But she stresses that the bank's payoff will be in the long run, not immediate.

"We want to offer counseling on all fronts, not just on rates, etc.," she explains. "If the problem is 'I want to buy a house,' don't talk about mortgages yet."

The program helps consumers find a house, she says, and she hopes they remember Connecticut National when they need a mortgage. ■

"Bankers are still unsure whether interactive video machines can help bridge the gap between branches and their customers."

CHOOSING THE RIGHT POINT OF SALE SERVICE IS NO PIECE OF CAKE.



When you're offered one tasty morsel after another, it's tough to choose the **right** point of sale service for you and your customers. But there **is** a service that offers financial gourmets more than mere morsels. This service offers a total menu of capabilities from end to end. It's **CoreStates' ACCESS.**

ACCESS serves up every electronic processing tidbit available—from both debit card and credit card acceptance to comprehensive, on line data collection—and then some.

ACCESS is a proven, reliable, one-source nationwide service (we've got billions of transactions under our belt), experienced in creating flexible electronic payments programs to satisfy every taste.

For more information, call Jeff Connelly—215-629-4565—and get our recipe for your success—or just some food for thought.

Access
ELECTRONIC PAYMENTS SERVICE

CoreStates Financial Corp

It's People, Not Machines, That Cause the Big Glitches

Communication between users and vendors is the key to a smooth-running system

BY YVETTE D. KANTROW

Ask bankers to identify the systems problems that confront their institutions now, and the resulting list is likely to be as diverse as the personalities of the respondents themselves.

But as different as the answers may seem, they are alike in that they have more to do with people than with machines. "If people don't work systems correctly, systems aren't worth a damn," says a senior administration officer at a Florida bank.

The results of *American Banker*'s first annual technology survey do not point to any one dominant technology dilemma facing banks today. In fact, 32% of the bank and thrift executives polled cite unique systems problems.

Complaints range from one Northeast banker's cry that "it's misinterpreting the users' wants that's the problem," to a Vermont banker's contention that ineffective training is the culprit. "Training can't be accelerated fast enough to keep up with technology," he says.

While the responses are diverse, lack of communication among the users, the vendors, and the technology personnel within banks seems to be an underlying theme. Among other problems, misunderstandings can lead to exaggerated expectations.

A major problem in bank automation today is that hardware development has outpaced software development, says William Czerniewicz. He is executive vice president at Security Pacific Automation Co., a subsidiary of Security Pacific Corp., Los Angeles.

The problem, Mr. Czerniewicz says, can be attributed to a lack of effective dialogue between vendors and bankers.

A rift between bankers and vendors is also mentioned by respondents to the survey. The challenge, according to one Northeast banker is "getting vendors of branch automation equipment to realize what banks need and what would be good for banks, as opposed to what they feel the banks need. [Vendors] need to understand banking."

While this banker refers specifically to vendors of branch automation equipment, his statement typifies the general banker-vendor communications problem. Mr. Czerniewicz explains that banks are partly to blame for the vendors' lack of knowledge.

While the onus is on vendors to develop systems and software, they are often forced to work in a vacuum, he says. "Banks have not done a good job of telling vendors what they want," Mr. Czerniewicz adds.

Inherent differences in the ways bankers and vendors operate also hinder the development of systems that meet banks' needs, he says.

Banks traditionally develop smaller pieces of integrated systems one at a time — savings, demand deposit, or loan systems, for example. Vendors are more inclined to develop and want to sell larger integrated products.

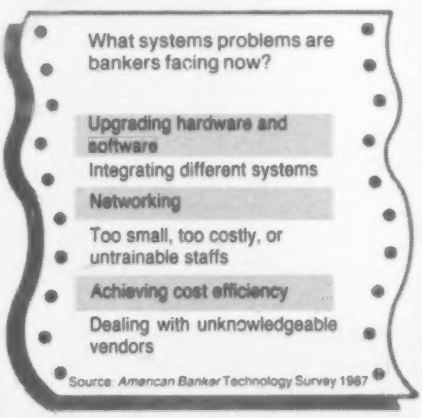
Elaine Bond, a senior vice president at Chase Manhattan Bank, New York, points out that managing technology poses more problems than technology itself. "It's too easy to get mesmerized by technology and lose sight of the real challenge — to position your organization to adapt to technology, to migrate to it, and to use it," she says.

Shortsighted Solutions

One management issue banks must address today is how to respond quickly to external changes in the banking industry with long-term technological solutions. For example, Ms. Bond says, many banks today want to enter the securities arena rapidly. So they put pressure on their operations areas to build systems that provide them with capabilities for securities transactions.

As a result, many banks make large investments in temporary solutions and

The Thorns in Bankers' Sides


What systems problems are bankers facing now?
Upgrading hardware and software
Integrating different systems
Networking
Too small, too costly, or untrainable staffs
Achieving cost efficiency
Dealing with unknowledgeable vendors
Source: American Banker Technology Survey 1987

"Why did we install ISOETEC phone systems in over 200 of our locations? Centralized Management."

Chuck McMillen, Vice President - Telecommunications Services, VALLEY NATIONAL BANK, Phoenix, Arizona

Rapid growth at Valley National Bank, the largest in Arizona, presented two critical challenges to Chuck McMillen and his team: (1) to make certain the bank's telecommunications system enabled the staff to maintain the high level of customer service that is the foundation of the bank's marketing strategy, and (2) to control and manage the costs of that system expansion.

After a thorough review of alternative systems, Valley National selected ISOETEC. Here are just a few of the reasons . . .

"ISOETEC offered flexibility and cost performance attributes which were not available in any other system we evaluated."

- In over 200 of Valley National's locations throughout the state, single-line phones that were sitting behind a PBX were replaced with ISOETEC key systems. Cost savings in Off-Premise Extension (OPX) charges alone have been substantial. In addition, the ISOETEC phones provide each staff member with access to a wide range of features to increase productivity . . . and every button on every phone is individually programable to the needs of the person using it.
- The unique ISOETEC system enables Chuck and his team to gather call summary information at a central point — information that enables them to determine the optimum level of trunking for each location . . . enough to assure proper customer service for that location, but no more than necessary. Chuck calls it "tuning the system" . . . and another source of substantial savings to the bank.
- ISOETEC's unique ability to diagnose problems and program remotely over the telephone from a central computer facility saves Valley National even more in service calls (and unproductive downtime).
- Since ISOETEC systems are software-based, adding applications to solve specific telecommunications problems is as easy as plugging in the appropriate software — no expensive additional hardware to buy. — e.g., Valley National uses Automatic Call Distribution (ACD) in several departments to efficiently distribute a high volume of incoming calls to a small staff (centralized inquiry service on charge cards, centralized internal service functions, etc.) . . . and whenever ACD is needed, they just plug in the software and designate which phones will be on the ACD system.
- Every ISOETEC telephone is compatible with any software application . . . so Valley National is able to move systems around because of branch consolidations, centralizing or decentralizing offices . . . and the phones are compatible with whatever application is used in that new office.

ISOETEC is revolutionizing multiple-office telecommunications for banks of all sizes. Before you buy or lease any system, look at ISOETEC.

ISOETEC®

For the ISOETEC office nearest you, call toll-free...

1-800-222-0461

In New Jersey, call 1-800-345-6903

> "While the onus is on the vendors to develop systems and software, they often have to work in a vacuum."

lose sight of the long-range picture. "Banks have to decide if they are going to devote all of their resources to developing *ad hoc* solutions one at a time, or if they are going to proceed with development in a business-as-usual way," she explains. When institutions develop systems in an *ad hoc* manner, they are eventually faced with integration and networking problems, she says.

Integrating different systems and networking did make the list of thorns in bankers' sides, with respectively 11% and 4% of the sample mentioning them as their biggest current systems problems. At larger banks — those with more than $2 billion in deposits — 23% say integrating different systems is their biggest problem.

At global institutions, linking independent systems is becoming a priority, Ms. Bond says. "You're seeing the evolution of linkages to help them move from a product-specific position to one that helps them cross-sell all of their products." ■

Where Technology Has Gone Astray

"HOME BANKING HAS BEEN A REAL FLOP AS FAR AS I'M CONCERNED. THE TECHNOLOGY IS THERE BUT CUSTOMERS AREN'T READY TO ACCEPT IT."

— Executive vice president of Tennessee bank

"IT'S NOT A TECHNOLOGY ISSUE. TECHNOLOGY WILL DO WHATEVER YOU WANT IT TO DO. IT'S MISINTERPRETING THE USER'S WANTS, THAT'S THE PROBLEM. SOMETIMES TECHNOLOGY PEOPLE DON'T UNDERSTAND THE BUSINESS ENVIRONMENT."

— Vice president from Illinois bank

"ADVANCEMENT OF TECHNOLOGY IS SO DYNAMIC THAT IT PUTS SMALLER BANKS OUT OF THE RACE. ONLY MAJOR BANKS HAVE THE MONEY TO WORK AND USE THE SYSTEMS."

— Assistant vice president of Texas thrift

"TECHNOLOGY DOESN'T DELIVER WHAT WAS PROMISED. IT IS MOVING FASTER THAN WE CAN KEEP UP."

— Vice president of operations at Maryland bank

"THE DOWNTIME IS DISAPPOINTING. THE COMPUTERS ARE GREAT IF THEY ARE WORKING, BUT IF THEY DON'T WORK YOU ARE PARALYZED."

— Branch manager at North Carolina thrift

Proven Software, Excellent Support, Unparalleled Service. All From One Company.

All From SSI.

You have a question...you want an answer. You have a problem... you want it solved. You need help... you want service.

Service is what has set SSI apart from other software companies for the past 16 years. At SSI, service is an attitude, a promise, a commitment. A commitment best expressed by our company motto: "You that would be greatest, let him be servant to all." (Matthew 20:26)

To us, service involves enhancing our products with your suggestions; providing user group meetings; plus providing in-depth training, conversions and installation assistance.

With our proven software and excellent support, you'll have the answer to your questions, the solution to your problems and the service you deserve.

PROVEN SOFTWARE FROM SSI

ACH Processing—PEP/PEP+, MicroACH

The industry's highest rated software in overall customer satisfaction, these on-line, realtime systems originate, receive and warehouse ACH transactions.

Check Processing—ORBS, TCM, CLAS, BFCS

Working with IBM 3890 Check Sorters, these systems offer on-line reconcilement, departmental balancing, cash letter administration and bulk filing/fine sorting.

Securities—CSSII

CSSII is an on-line, realtime securities recordkeeping system handling stock, registered bond and other securities processing.

Loan Origination—OMNI

With OMNI, you'll automate all document, report and loan calculation processing related to loan origination.

Lease Accounting—ALAS

ALAS, an on-line realtime mainframe system, provides comprehensive processing capabilities for both vehicle and equipment leasing.

Safe Box Accounting—SBA

SBA streamlines safe box operations through recordkeeping and invoice automation.

Home Banking—PTT

With PTT, your retail and small business customers pay bills, transfer funds and perform balance inquiry by using a telephone or PC.

Corporate Cash Management—PTT+

PTT+ provides for balance and detail reporting, lockbox reporting, funds transfer and cash concentration/deposit reporting.

Data Center Support—CSAR, CSAR/CMS, QT, QC, Workflow, SJS

Our data center support products offer the following: Job scheduling, on-line operational documentation and operating system maintenance verifications.

Every day over 1,000 institutions and 10,000 people depend on software from SSI. They have enjoyed our unparalleled service—you can, too. Call us today. Or better yet—call our customers! For an SSI client list and product information, call **(404) 441-3387** or write to: SSI, 4411 E. Jones Bridge Rd., Norcross, GA 30092.

SSI

SSI. Where Commitment Is A Reality.

American Banker's First Technology Survey: The Questionnaire

Organizational Structure & Personnel

1. What is the title of the most senior officer directly responsible for the overall management of operations within your institution, the individual to whom operations such as data processing, check processing, MIS operations, branch operations, EFT operations, and other processing- or technology-oriented divisions in your institution report?

a. President
b. Senior executive vice president
c. Executive vice president
d. Senior vice president
e. Cashier
f. First vice president
g. Vice president
h. Assistant vice president
i. Director/Manager
j. Other
k. Don't know/Refuse

2. And to whom does the most senior officer in charge of operations report?

a. Chairman/Board of directors
b. President
c. Senior executive vice president
d. Executive vice president
e. Senior vice president
f. Cashier
g. First vice president
h. Vice president
i. Other
j. Don't know/Refuse

3. Approximately how many employees, measured in full-time equivalents, work within your operations and technology areas?

A. And approximately how many employees, in full-time equivalents, does your institution have all together?

B. Overall, are the number of professionals employed within your operations and technology areas increasing, decreasing, or remaining stable at their current levels?

If your staff is increasing or decreasing, by what percentage is your professional operations and technology staff increasing or decreasing per year?

C. Do you anticipate that the number of professionals in the operations and technology areas will increase, decrease, or remain stable relative to the other positions in your institution over the next 5 years?

D. Approximately how many employees, in full-time equivalents, currently work within your:

Data processing operations
MIS area
Systems, procedures, and programming area

E. Is the number of professional staff in these three areas currently increasing, decreasing, or remaining about the same?

F. If your staff is increasing or decreasing, by what percentage is your professional staff in these areas increasing or decreasing per year?

4. What is the current annual turnover rate among professionals in the operations and technology areas of your institution?

A. Is the turnover rate among professionals in your operations and technology areas generally higher, lower, or the same as in other areas of your institution?

B. In what operations or technology area or unit are you currently experiencing the greatest turnover rate?

Operating units:
1. Check processing operations
2. Data processing operations
3. MIS
4. Systems, procedures, and programming
5. Customer accounting and bookkeeping
6. Branch operations
7. Merchant services and POS operations
8. ATM operation
9. Security
10. Credit card operations
11. Wire transfer operations
12. Trust operation
13. Commercial loan operations
14. Mortgage loan operations
15. Consumer loan operations
16. International services/foreign operations
17. Other (please specify)
18. Don't know

C. Would you say the turnover rate in your operations and technology areas is primarily due to:

1. job pressure and burnout
2. recruiting from other banks
3. recruiting from companies outside the banking industry
4. lack of commitment to professional track
5. lack of advancement opportunity
6. inadequate compensation
7. Other reason (specify)
8. Don't know

D. What have you done to reduce turnover?

1. raised salaries
2. improved benefits (i.e., vacation, pension, insurance, etc.)
3. improved job definitions, career paths, and advancement opportunities
4. improved working environment
Specify how:
5. Other
6. Nothing
7. Don't know

5. On a scale of 1 to 5, with 1 being far less satisfied, 3 as satisfied as, and 5 far more satisfied, what would you say the overall level of job satisfaction is among the professional staff in your operations and technology areas as compared to other areas of your institution?

6. Again on scale of 1 to 5, with 1 being far worse, 3 as good as, and 5 far better, what would you say the opportunity for job advancement among professionals is in the operations and technology areas as compared with other areas in your institution?

A. On the same scale of 1 to 5, what would you say is the potential for advancement from the operation and technology areas into senior management positions as compared with other areas of your institution?

7. On average, are the salary or compensation levels among the professional staff in your operations and technology areas generally higher, lower, or about the same as for comparable professionals at similar stations in other areas of your institution?

A. If the salaries are higher or lower, by what percentage would you say their compensation level is higher or lower than other comparable professionals?

8. On a scale of 1 to 5, with 1 far more difficult, 3 as difficult as, and 5 far easier, how difficult would you say it is to recruit professional staff into the operations and technology areas as compared with other areas of your institution?

A. Which method or source do you use most frequently to identify and recruit new employees for professional positions in your operations and technology areas? And the second most frequently used? And the third?

1. referrals from current employees
2. newspaper ads
3. recruiting firms
4. job fairs
5. professional associations
6. college recruiting
7. soliciting from other banks
8. hiring from vendor organizations or consultants
9. industry "network"/personal connections
10. trade shows, conferences
11. other

9. Looking at your bank's total expenditures on operations and technology, approximately how much are you spending on these areas in 1987?

A. By what percentage would you say these expenditures increased or decreased from 1986?

B. And what percentage increase or decrease do you expect for 1988?

C. Approximately what portion of total 1987 expenditures on operations and technology is being spent on systems, including hardware, software, telecommunications, and research and development; what portion is going toward people (salaries, benefits, recruiting, and training); and what portion is allocated on other expenses? And approximately what portion do you expect to spend on systems, people, and other expenses in 1988?

10. I'd now like to focus on the professional positions and personnel that work in the area of computer systems, procedures, and programming. In these areas, would you tell me the approximate number of people you have employed as programmers and the number employed as system operators or analysts? Excluding these, approximately how many other computer professionals are on staff?

A. I'd like to determine the salary range for the professional positions in these areas. For each position, please tell me the minimum and maximum annual salary level.

B. Do you provide any bonuses, incentive plans, or significant perks to your professional computer staff in addition to their base salaries?

C. What percentage of total annual compensation is attributable to your incentive or bonus plan?

11. Of the professional positions we covered in the systems and programming area, which would you say is the hottest position that holds the greatest potential for advancement in your institution?

A. Which of the professional positions in systems and programming are the most difficult to fill with qualified candidates?

B. Do you generally recruit professionals for positions in the systems and programming area from within the banking industry, from other industry sectors, or from the universities?

C. In what other industry sectors do you actively recruit?

12. Do you have a formal research and development function within the data processing area?

A. What percentage of the annual data processing budget goes to research and development?

B. Do you plan to establish a research and development department?

Vendor Evaluation

13. Changing topics for a moment, who manufactured the mainframe computer or primary computer system currently operated by your institution?

a. Do not operate own computer
b. Amdahl
c. Burroughs (Unisys)
d. Data General
e. Digital Equipment (DEC)
f. Hewlett Packard
g. Honeywell
h. IBM
i. NCR
j. Prime
k. Sperry (Unisys)
l. Tandem
m. Wang
n. Other
o. Don't know

A. I'd like to read a list of factors and ask you to evaluate your primary computer as (1) poor, (2) fair, (3) average, (4) good, or (5) excellent in terms of its:

1. hardware reliability
2. processing speed and capacity
3. vendor maintenance and service
4. compatibility with other systems
5. expansibility
6. vendor's commitment to state-of-the-art technology
7. ease of operation
8. software availability and vendor software support
9. price
10. overall satisfaction

B. Is the overall performance of your primary computer system and the after-sale support provided by the vendor you purchased it from better than expected, as expected, or less than you expected?

14. Turning now to software, I'd like to read a list of application software packages and ask you which vendors made the software you currently use.

a. demand deposit accounts
b. time deposits
c. consumer loans
d. commercial loans
e. general ledger
f. accounts receivable
g. accounts payable
h. branch banking, teller, and administrative terminals
i. check processing
j. customer information files

15. Of those software vendors you've mentioned, how would you rate the overall quality of their products on a scale of 1 to 5 with 1 being poor, 3 average, and 5 superior?

a. AFS (Automated Financial Systems Inc.)
b. Alamo Systems (Card Systems)
c. Anacomp inc. (Kranzley Corp.)
d. Broadway Seamour
e. BSI Inc.
f. Burroughs (Unisys)
g. Credit Card Systems Inc.
h. Cullinet (BWCS Software Inc.)
i. Data Link (owned by Mellon Corp.)
j. EDS
k. Florida Software
l. Hogan Systems
m. IBM
n. M&D McCormick and Dodge
o. M&I (Software Alliance Corp.)

Would you like additional copies of our technology special report? Or, how about our data in other formats?

The 1987 AMERICAN BANKER First Technology Survey magazine is must reading for operations and automation decision-makers and the chief executives to whom they report. The survey of senior bank operations managers is the first of its kind to delve into executives' attitudes about three major aspects of operations and technology in the nation's banks: how operations departments are organized, staffed, and compensated; satisfaction with computer and software vendors; and emerging issues and trends. Additional copies of this magazine can be obtained for $29.95 each (plus $2 for postage and handling) by filling in the coupon.

The AMERICAN BANKER and TRANS DATA CORP., which conducted our survey, are also making available the data from this technology survey in other formats. The raw data are available on magnetic tape or diskette and the computer cross-tabulations are available in hard copy. Simply fill in the second coupon on this page.

Cut along dotted line

Order Form: 1987 American Banker Technology Survey

Fill in quantities required below

FOR SURVEY MAGAZINES AND REPRINTS
SINGLE COPIES: ____ copies@ $29.95 apiece. Please add $2 for postage and handling.
GROUP DISCOUNT: ____copies @ $20 apiece (quantities of 10 or more). Please add $2 for postage and handling.

Name _____ **Company** _____

Street _____

City _____ **State** _____ **Zip** _____

Payment to AMERICAN BANKER is enclosed.
Bill my _____ Visa, _____ Mastercard or _____ American Express card.
Card Number _____ Exp. Date _____ Signature _____

Mail orders for reprints and tapes to:
Tania Lequerica
Attn: 1987 TECHNOLOGY SURVEY ISSUE

American Banker
1 State Street Plaza
New York, N.Y. 10004

Cut along dotted line

Order Form: For Technology Survey Data Available in Other Formats

Fill in quantities required below
I want:

- _____**Magnetic tape** — nonlabelled, ASCII, flat file — @ $315 (plus $12.50 for postage and handling)
- _____**Diskette** @ $150 (plus $4.50 for postage and handling)
- _____**Hard-copy** report @ $165 (plus $4.50 for postage and handling)
- _____**Computer cross-tabulations** @ $200 (plus $12.50 for postage and handling)
- _____**Tabulations and report** @ $365 (plus $17 for postage and handling)

Name _____ **Company** _____

Street _____

City _____ **State** _____ **Zip** _____

For this data: Send order — including name and address — and payment to Charlette Muldoon, Trans Data Corp., 530 Riverside Drive, Salisbury, Md., 21801. 301-543-4400

ACH Communications puts money in the bank!

HERO™ ACH Concentrators start at less than $10,000 from Momentum Systems.

(formerly Mohawk Data Science's Systems Division)

You need to attract money to make money.

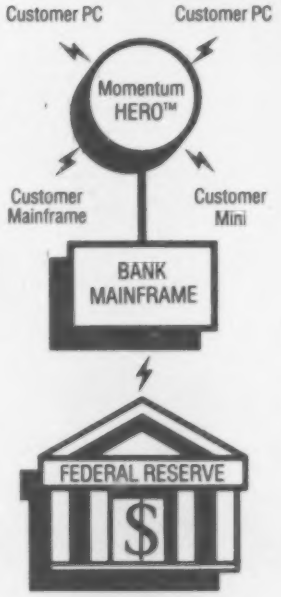
And Momentum's multifunctional HERO™ concentrator with ACH PC Communications makes it easier for customers to put money in the bank!

We know that handling cash concentration, direct payroll and corporate trade payments are services that are important to your customers. To provide these services, you must economically and efficiently collect ACH transactions from your commercial accounts. When you use a HERO system from Momentum there are many advantages.

- You can collect and batch all your incoming transactions before sending them to the mainframe for processing.
- After mainframe processing you can communicate directly to the Federal Reserve.
- Your growing ACH transaction volume is managed without additional mainframe overhead.
- You reduce time-consuming bulk transmissions from your mainframe so other critical host processing applications can continue uninterrupted.
- You benefit from a system capable of performing powerful functions beyond ACH communications.

Since 1980, Momentum's turnkey ACH communications have been installed by hundreds of financial institutions and service bureaus. The Momentum Systems approach to ACH communications is complete. Your initial investment in HERO gives you everything necessary for approved ACH funds transfer.

Most important, HERO's ACH communications and PC connectivity make it easier for your customers to do business with you!



NEED TO COMMUNICATE WITH MOHAWK OR IBM? TALK TO MOMENTUM.

Whether you need to communicate with a Mohawk system, an IBM PC,™ or virtually any vendor's mainframe, Momentum's communications products provide the compatibility.

Because Momentum Systems began with MDS' Systems Division's twenty years of experience in distributed processing and communications, you are assured of some of the most advanced products and extensive support in the industry.

PC CONNECTIONS WITH MOMENTUM

Whether you're talking ACH or data processing in general, there are people in your organization as well as customers who already have IBM PCs or compatibles.

And, HERO supports remote communications. For example, HERO can collect ACH data or other payment information from your customers' PCs, then communicate it to your mainframe for processing, or to the Federal Reserve, or transfer the data to tape.

A SOLUTION WITH MOMENTUM

At Momentum Systems we have given a lot of thought to the problems that banks face when they want to increase the volume of ACH transactions. Our goal was to develop a product that would make handling this growth easy and relatively low cost when compared to the continual expansion of the mainframe.

It was clear that our product would have to be both hardware and software and should be able to:

Communicate
- with a network of PCs
- with customer mainframes
- to the Federal Reserve Clearing House

Support
- multiple communications lines concurrently
- a variety of communication line speeds concurrently
- a variety of communication protocols concurrently
- ½" tape with a variety of storage densities
- hard disk storage

Offer
- modular growth to meet increasing volume requirements
- direct connectivity to local PCs
- the latest advances in microprocessor design
- a multitasking operating system
- easy installation and operation
- inexpensive purchase and maintenance

To meet these requirements we offer:

The Momentum HERO ACH Concentrator!

If you would like to know more about Momentum Systems' HERO for ACH Communications and PC Connectivity, call 1-800-835-5797 (1-800-221-1182 in NY). Or, send us this coupon.

☐ YES! Please send me your color brochure "Momentum's Turnkey ACH Communications" and information on PC Connectivity.

☐ Please have a Momentum Systems Sales Representative contact me.

Name _____

Title _____

Bank/Company _____

Address _____

City _____ State _____ Zip _____

Phone (_____) _____

Momentum Systems

Mail to: Momentum Systems Corporation, Financial Systems, 6100 West Creek Rd., Suite 4, Independence, Ohio 44131 Attn.: John Kodrich

Specifications are subject to change.

Momentum HERO is a trademark of Momentum Systems Corporation, Extended Multiplan is a trademark of Microsoft, Inc.

p. MSA Management Science America
q. MTech
r. NCR Corp.
s. Pacesetter Systems
t. REI
u. Shaw Systems Associates
v. Sterling Software Inc.
x. Systematics Inc.
y. Tymshare Banking Systems
z. Uccel Corp. (CA)
aa. Weiland Software Corp.
bb. Other
cc. Don't know

A. Thinking about all of the sales representatives that call on you from the various hardware and software vendors, I'd like you to rate them across several factors. In general, on a scale of 1 to 5, with 1 being poor, 3 acceptable, and 5 excellent, how would you rate their:

1. knowledge of your bank's hardware and/or software needs?
2. knowledge of the vendor's products and services?
3. overall knowledge of bank systems, equipment, and software?
4. prompt and effective follow-up
5. ability to make decisions and negotiate contracts?
6. commitment to helping you to identify the most cost-effective and overall best solutions for your institution?

B. In general, what is your overall impression of the hardware and software sales representatives that call on you?

16. In closing, I have a few questions regarding future technologies. On a five-point scale, with 1 very unlikely and 5 very likely, in your opinion how likely is it that the following systems and services will be in widespread use within the next five years?

a. combined debit and credit on one plastic card
b. smart cards replacing traditional credit cards
c. check truncating using image processing technology
d. unstaffed, fully automated branches
e. public access video kiosks for financial services
f. video banking in the home
g. video banking for businesses
h. loan approvals by expert systems
i. customer service provided by automated voice response systems
j. desktop publishing in banks
k. 24-hour, global securities trading and funds transfer systems
l. advanced biometric identification of customers

In particular how likely is the use of the following biometric identification systems?

a. signature dynamics
b. fingerprint or handprint readers
c. eye retina scanning
d. voice recognition

What technology, technique, or breakthrough(s) are you hoping for that you believe would make the greatest operational impact in the future?

What is the biggest current systems problem or set of problems that you have that needs to be resolved?

17. What is the biggest challenge facing your bank as it attempts to integrate technology more fully into its operations?

a. top management's unwillingness to spend money
b. unavailability of necessary software
c. incompatibility of existing; computer systems with emerging technologies
d. unwillingness of customers (retail or corporate) to use new technologies
e. shortage of properly skilled staff
f other

18. Where would you say technology has made its most significant contribution to efficiency or management of bank operations?

19. And what has been technology's greatest disappointment for failure to deliver what was promised?

Copyright 1987 All Rights Reserved
Trans Data Corporation

NSS Puts Branch Automation in PERSPECTIVE

Competitive edge... increased deposits... improved productivity... effective sales presentations... expanded information sharing... enhanced customer service...

At NSS CORP, we share your perspective that these are the keys to your ultimate goal — increased profitability. So we've used them as our guide in creating fully integrated products and services.

Introducing NSS PERSPECTIVE™

NSS PERSPECTIVE is the framework from which cost-effective, customized branch automation systems are designed, constructed, installed, maintained and supported. NSS PERSPECTIVE responds to the unique and shared requirements of your teller, sales/marketing, administrative, and branch management areas. And because no single branch automation solution is right for every bank, NSS PERSPECTIVE offers a variety of elements that allow you to meet your specific requirements: Analysis and Design; Communication/System Software; Application Software; Hardware; Customization and Integration Services; Installation and Implementation Services; Education and Training; and Maintenance and Support.

NSS PERSPECTIVE is more than hardware, software and services. It's our proven ability to deliver results. It's a staff whose experience and creative talents are unparalleled in the financial services industry. And it's the assurance that NSS CORP will continue to meet your future branch automation needs.

NSS PERSPECTIVE. Complete branch automation systems designed, constructed, installed and supported — with your perspective in mind.

Call an NSS representative today for complete details.

NSS corp

We Put It All In Perspective

NSS CORP • 19 Kilton Road • P.O. Box 190 • Bedford, NH 03102-0190 • (603) 668-6966

NSS PERSPECTIVE is a trademark of NSS CORP

© 1987, NSS CORP

Selected Index to Technology Articles

The following is a selected index of the top technology related stories that appeared in the American Banker during the last year, arranged by subject. The date on which the article appeared precedes each item. This feature was compiled by Orest Mandzy.

Credit Cards/ Point of Sale

JANUARY

1/07 **Nine major banking companies and Visa U.S.A. are forming** their own, private automated clearing houses. p. 3

1/09 **A coalition of Texas consumer groups charged** that consumers are being charged high credit card rates to subsidize banks' bad loans. p. 6

1/09 **California Bank cardholders are the worst off in the country** because there is no competition among the state's four largest banks. p. 6

1/09 **Consumers Union says that banks' claims** that high credit card rates are needed because of high losses is just "baloney." p. 6

1/12 **Consumers prefer to make purchases with cash or checks** rather than credit cards or electronic funds transfers, says a survey. p. 3

1/13 **Those consumers who maintain high monthly balances** on their credit cards now have a way to cut the finance charges. p. 6

1/13 **American National Bank of New York is "challenging"** the industry by offering a credit card with a single digit interest rate. p. 6

1/14 **Bankers are worried about a rising tide of personal bankruptcies** that is pushing up loan losses at credit card operations. p. 24

1/16 **RepublicBank Corp. is selling $200 million in notes** backed by credit card receivables, the first public securities offering of its kind. p. 3

1/19 **Chemical Bank is expected to slash to 16.8% from 19.5%** the interest rates it charges customers of its Visa and MasterCards. p. 1

FEBRUARY

2/06 **Union National Bank of Little Rock,** which offers one of the lowest credit card rates in the U.S., will raise its rates June 2. p. 9

2/17 **TransFirst Corp. won a contract** to develop the nation's first fully electronic system for distributing welfare benefits. p. 2

2/24 **Connecticut's People's Bank has been inundated** with credit card applications from as far away as Hawaii and Alaska. p. 8

2/25 **Growth in point-of-sale payment terminals** is on the verge of exploding, a study says. p. 11

MARCH

3/2 **Massachusetts is considering a bill** that would lower the maximum credit card interest rate the state's banks could charge consumers. p. 2

3/2 **Georgia's General Assembly voted to deregulate** credit card interest rate and fee ceilings. p. 2

3/3 **A new New York State Banking Department study** strongly opposes interest rate ceilings on consumer credit. p. 18

3/4 **Michigan's 10 largest banks say they have no plans** to lower credit card interest rates. p. 2

3/10 **Texas' independent bankers are fighting** their larger credit card-issuing competitors with a new low-rate card. p. 6

3/12 **American Express said it will unveil** a variable-rate revolving credit card, dubbed Optima. p. 1.

3/12 **The Bank of China said it will become a member of Visa** International, which may make it the first credit card issued in China. p. 3

3/24 **Consumer groups say** a new disclosure bill in Congress will satisfy a growing demand among consumers for access to credit information. p. 9

3/26 **Visa U.S.A. is under investigation** for possible antitrust violations stemming from a letter it sent to its member banks. p. 2

3/30 **The Bank of China signed an agreement** to become a member of MasterCard International. p. 2

3/31 **TRW Information Services has a new system** for prescreening credit card solicitation mailing lists that evaluates response rates and credit risks. p. 6

APRIL

4/7 **Bankers' mouths water** at the thought that 10.2 billion transactions take place each year at fast-food restaurants in the U.S. p. 2

4/8 **One of France's major players** in the bank card and electronic funds transfer industry is plotting a U.S. invasion. p. 10

4/22 **Citibank's European Banking Center plans to market** smart cards to affluent depositors. p. 2

4/23 **Credit card loan balances are flat** or declining at a number of banks, and industry observers say this signals a war for market share. p. 1

4/27 **Consumers are making plans** to alter their financial behavior in light of recent changes in tax law, a new survey says. p. 1

4/30 **Sears, Roebuck and Co. is close to surpassing Citicorp** as the nation's largest issuer of revolving credit cards. p. 1

MAY

5/7 **Central Fidelity Bank of Richmond, Va., has the best** credit card rate in the nation, a consumer group says. p. 49

5/18 **More Americans are using credit cards than ever before,** despite tax law changes. p. 2

5/22 **Associates Federal Savings began test-marketing** a gold MasterCard with a fluctuating interest rate. p. 2

JUNE

6/4 **Barclays Bank PLC launched** Britain's first mass-market debit card. p. 1

6/11 **MasterCard and Visa have resolved a dispute** that had threatened to delay the October launch of their joint, nationwide debit card. p. 2

6/16 **Chase Manhattan has introduced a Visa card** that will support the work of the U.S. Committee for UNICEF. p. 8

6/22 **Mobil Oil Corp. will offer a payment card** that combines both credit and debit services. p. 7

JULY

7/1 **American Express Co.'s Optima card is a hit** with the upscale, credit-hungry consumers whom American

Continued on page 80

What Every Banker Should Know About MISER's Integrated Solutions

We Can Do It All For You

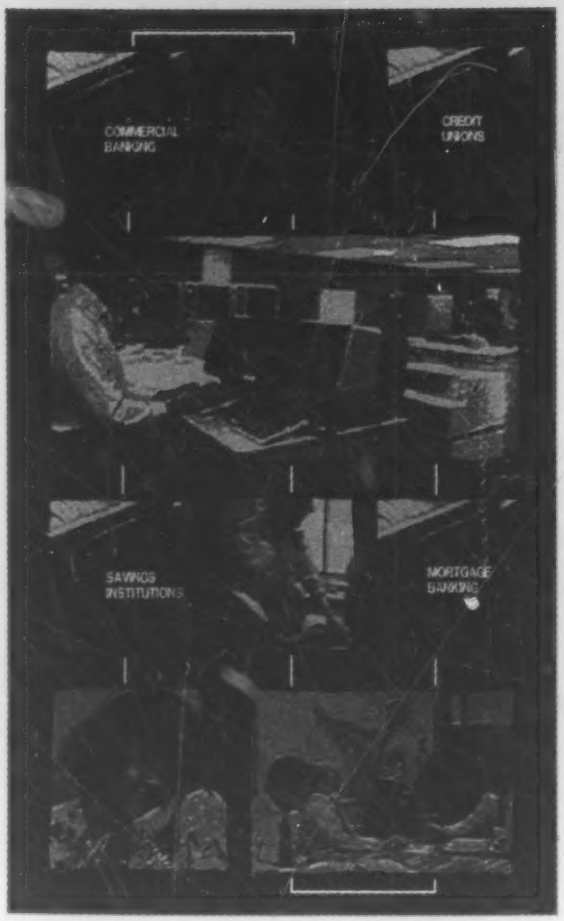
For many financial institutions, our MISER in-house data processing solution holds the answer to increased productivity, flexible services and higher profits. At Newtrend, our goal is to make going in-house an easy proposition. That's why we offer complete Service & System Integration.

Going In-House, We'll Do It Your Way

With Newtrend, you can have as much or as little involvement as you desire. As your Service & System Integrator, Newtrend is your *single source.* We can coordinate everything from hardware and software to staffing and space planning. After everything is installed and the staff has been trained — you can take over. But your options don't stop there.

Going With MISER, But Not In-House

Full or Modified Facilities Management actually places your data processing operation in the hands of experts — on-site or off the premises. We'll even match the systems plan with your business plan. While you manage your financial institution, Newtrend will manage all or part of the data processing operation for as long as you want.



MISER — The Basis For Our Expertise

For 11 years, MISER has been the most widely used in-house, real-time integrated financial system in the country. More than 180 savings institutions, commercial banks, mortgage banks and credit unions have come to depend on our knowledge of banking and technology. MISER provides everything from traditional savings products to innovative commercial applications to PC and work station products and more.

Regardless Of Your Needs, We're Here To Serve

Newtrend is committed to providing the services that keep MISER performing at the highest possible standard of excellence. We accomplish this objective by maintaining a superior service and support team. Our service organization includes installation, education, client support, consulting, documentation, contract programming and disaster recovery — all are part of the proven flexible MISER solution from The Newtrend Group, Inc.

Find out more about MISER's Integrated Solutions — call Greg Caine (305) 297-0870 or complete this coupon today.

MISER™

The Real-Time Integrated Financial System

YES, Send me more information on MISER's Integrated Solutions.

Name _____ Address _____

Title _____ City/State/Zip _____

Institution _____ Phone _____

The Newtrend Group, Inc., 2601 Technology Drive, Orlando, FL 32804

Express most wanted to attract. p. 1

7/1 Visa has launched a multimillion-dollar advertising and public relations program to dissuade consumers from using Optima. p. 1

7/2 New York passed a bill to extend a ban on a credit card interest rate ceiling and to allow banks to market no-grace-period cards. p. 3

7/8 Club Mediterranee sees smart cards replacing its bead currency at its resorts. p. 10

7/23 Vietnam Veterans of America will market a Visa card through Dollar Dry Dock Savings Bank, adding a new twist to the affinity card phenomenon. p. 12

7/28 MasterCard International unveiled a new credit card design that gives member banks 80% of the card face to do with as they please. p. 1

AUGUST

8/11 Citicorp has given up on its private credit card, called Choice, and will issue customers Visa cards instead. p. 1

8/14 Visa said that its automated teller machine network has grown to the largest bank-owned ATM network in the world. p. 1

8/26 The International Standards Organization has taken steps to prepare for an anticipated explosion of smart cards. p. 8

SEPTEMBER

9/2 Internet is officially entering the point-of-sale business. p. 6

9/9 A New Zealand merchant bank will become the first to issue all its MasterCards in smart card form. p. 6

9/11 Rep. Frank Annunzio, D-Ill., is pressing for a House floor vote on an amendment that would set limits on the interest banks could charge on credit cards. p. 3

9/15 Banks hope to score with football fans through an affinity credit card with their favorite NFL team. p. 10

9/18 *Bank Credit Card Observer,* a newsletter that monitors the credit card industry, has received funding from American Express Co. p. 1

9/21 Consumers rank the American Express card above or on a par with Visa and MasterCard for a wide range of features, an *American Banker survey says. p. 1*

9/21 The growth of the Discover credit card has catapulted Sears, Roebuck and Co. to the position of the nation's 15th biggest credit card lender. p. 2

9/21 About a third of the nation's bank credit card issuers lowered their interest rates on card loans in the 12 months ended June 30. p. 2

9/21 American Express Co. acted fast last week to air its side of a story that revealed it was supporting a credit card industry newsletter. p. 2

9/22 The editor and publisher of *Bank Credit Card Observer* says he made a mistake in not disclosing that American Express Co. funds the monthly newsletter. p. 2

9/24 Bank credit card profitability has passed its peak and may never return to the record level of 1985 and 1986, one analyst said. p. 1

9/24 The presidents of MasterCard and Visa stepped up their attacks on American Express Co. and the bankers who continue to sell American Express products. p. 14

OCTOBER

10/2 The Treasury Department said the public will be able to pay selected government agencies with Visa or MasterCard credit cards. p. 12

10/6 Although MasterCard and Visa agreed a year ago to develop a single point-of-sale debit card system, unanimity may still be missing. p. 10

10/14 Lucky Stores Inc. has become the first grocery retailer to say it will accept the Explore debit card. p. 6

Payments Systems/Electronic Funds Transfer

JANUARY

1/08 Citicorp will expand its new money transmission business using equipment from National Business Systems Inc., a Canadian supplier. p. 2

1/14 Oklahoma's three largest electronic funds transfer systems have been linked. p. 16

1/16 Banks may find themselves scrambling to stay within central bank limits on intraday overdrafts if a new proposal is implemented. p. 2

1/21 Point-of-Sale means two different things to bankers and merchants causing much disappointment to bankers. p. 9

MARCH

3/16 Regional automated clearing houses continue to disappoint bankers. p. 24

3/17 Chase Manhattan Bank continues to dominate the automated clearing house business. p. 1

3/18 General Electric Information Services Co. is giving up its attempt to operate an automated clearing house. p. 2

3/18 The 38% jump in volume at the Mid-America Payment Exchange last year was representative of the rest of the nation. p. 6

3/24 The Federal Reserve Board is in no hurry to make a final ruling on consumer protection regulations for electronic funds transfer systems. p. 5

3/25 The Fed has begun planning for a larger, more efficient, and more sophisticated automated clearing house system. p. 20

3/25 Responsibility for managing the Fed's electronic payment products switches to the Federal Reserve Bank of Atlanta Jan. 1, 1988. p. 20

APRIL

4/6 The Options Clearing Corp. said it will form a bank-owned clearing house that will clear and guarantee forex transactions in the interbank market. p. 2

4/8 MTech has become the second financial data processing firm to enter into the potentially huge "benefits transfer" business. p. 3

4/8 The Electronic Funds Transfer Association wants to take marketing matters into its own hands. p. 9

4/15 A Virginia company plans to test what it calls the "ultimate lockbox" on July 1. p. 2

MAY

5/4 Pennsylvania will soon being testing an electronic payment system for welfare benefits that could save the state $100,000 a year. p. 10

5/20 Payment services of the Federal Reserve System produced more revenue in 1986 than in 1985, but net income was down. p. 2

5/27 The Fed's search for a standard format for all electronic payments has turned up a possible solution from the private sector. p. 6

5/29 The switchover to a direct-deposit, book-entry system is falling into place at the Philadelphia Fed. p. 13

JUNE

6/2 The Fed must not rush to adopt a standard format for electronic payments without extensive consultations with commercial bankers, an ABA officer warned. p. 32

6/3 The Calwestern Automated Clearing House Association chose Visa U.S.A.

Continued on page 82

AT&T

305 Northridge Road
Suite 300
Atlanta, Georgia 30350

September 29, 1987

MINOLTA CORPORATION
Document Imaging Systems Division
101 Williams Drive
Ramsey, NJ 07446

Dear Sirs:

When you are responsible for keeping track of more than 100,000 microfilmed documents a month, as I am, you really appreciate a great reader-printer. Especially when you are anticipating an increase to more than 200,000.

I am writing to tell you how pleased I am with our new RP 507 from Minolta.

I chose it from among perhaps six different machines because I needed a reader-printer that would accept both ANSI and M-type cartridges. I also wanted superior prints on plain paper. And since 30 people or so would have to use the new reader-printer, it had to be easy to learn and use. The RP 507 impressed me on all counts.

Now, after a few months of using the RP 507, I am even more impressed. The motorized zoom feature and Minolta optical quality result in prints of extraordinary detail and clarity. Outstanding!

And so is the RP 507's reliability compared to our old equipment--only one service call in five months of heavy use.

I am enclosing a picture of me and our RP 507. Thought you would like to see how your reader-printer looks next to one very satisfied customer.

Sincerely,

Jack Duncan

J. T. DUNCAN, Asst. Mgr.
Accounts Payable

JTD/ds

Enclosure

FRANKLY, WE'RE FLATTERED.

If you'd like to find out more about the RP 507, see your Minolta dealer, who's part of our nationwide network. Or call toll-free.
And maybe one day we'll get a flattering letter from you. **1-800-821-7700, ext. 327**

MINOLTA DOCUMENT IMAGING SYSTEMS DIVISION

MINOLTA

©1987 Minolta Corporation

ONLY FROM THE MIND OF MINOLTA

to offer transaction processing services in competition with the Federal Reserve System. p. 2

6/4 **GTE EFT Services has acquired STS Inc.,** a bankrupt electronic funds transfer system in Atlanta. p. 2

6/25 **Corporate treasurers are complaining** that banks are delaying the processing of wire transfers. p. 1

JULY

7/2 **A one-year program to test "same-day" book-entry settlement of munis** will begin next week at the Depository Trust of New York. p. 6

7/20 **The federal government starts expanding** its payment of bills by electronic transactions instead of checks today. p. 1

7/29 **The Federal Reserve Board has imposed new measures** to sharpen its attack on funds transfer risk. p. 1

7/29 **The boom in interbank business** is expected to continue, according to the Bank for International Settlements. p. 2

AUGUST

8/05 **The ABA said the Fed should reissue for public comment a proposal** that would allow nonbanks to operate ATMs without providing monthly statements to consumers. p. 19

8/07 **The Federal Reserve Board has dealt the automated clearing house system** a major political victory by adopting amendments to its Regulation E. p. 1

8/27 **Underwriters of short-term municipal securities** are beginning to use an electronic clearing and settlement system that guarantees same-day payment in federal funds. p. 2

8/27 **Bear, Stearns & Co. has strongly criticized** the electronic depository for Government National Mortgage Association securities. p. 13

OCTOBER

10/12 **Chase Manhattan Bank and First National Bank of Chicago are unhappy** that they've been excluded from the LondonClear system being developed by British banks. p. 2

Technology/ Operations

JANUARY

1/02 **Uccel Corp., a major vendor of bank applications systems, closed** out the old year by acquiring two other software companies. p. 3

1/02 **The nation's three federal bank regulators hope to begin testing** a system that will enable banks to file call reports electronically. p. 1

1/07 **ImNet, the financial data joint venture of Merrill Lynch & Co.** and International Business Machines Corp., will cease operations Feb. 6. p. 6

1/13 **Norwest Corp. has joined the five-month-old effort of** Electronic Data Systems Corp. and Banc One Corp. to develop a software system. p. 3

1/14 **Tandem Computers Inc. introduced a duplicate backup system** that is so critical, computer operations can be running after a disruption. p. 15

1/14 **The ICOT Corp. made its first major sale** of its PinStripe point-of sale transaction terminals to Herman's Sporting Goods. p. 15

1/14 **Instabank announced a reciprocal interregional** sharing agreement with the Cashstream network. p. 15

1/15 **Systematics Inc. said that a system to retrieve information** and manage networking within financial institutions is available. p. 2

1/21 **Integration of systems was a major trend in banking software** in 1986, it should continue in 1987. p. 10

1/21 **Point-of-Sale means two different things to bankers and merchants** causing much disappointment to bankers. p. 9

1/23 **MasterCard's executive committee declined to endorse smart card** technology as had been urged by the MasterCard staff. p. 2

1/28 **ATMs have spawned a subindustry,** companies whose business is helping bankers manage their networks more effectively. p. 1

1/28 **One company claims to have found a way to get around** the smart card's biggest obstacle: its high cost. p. 7

1/28 **J.C. Penney Systems Services Inc. has consolidated its leadership** in the growing point-of-sale networking business. p. 8

1/28 **Chemical Bank signed up** for one of Digital Equipment Corp.'s new VAX minicomputers. p. 9

FEBRUARY

2/02 **Fewer institutions offer video banking this year** than a year ago and fewer plan to get into it. p. 1

2/04 **Automatic Data Processing Inc. has started development** of a microcomputer-based information system for Merrill Lynch. p. 8

2/04 **Express Teller is adding 37 ATMs with color graphics** to its network in Minnesota, North Dakota, and South Dakota. p. 8

2/04 **Omaha's Commercial Federal Savings & Loan Association is answering** many of its customers' account inquiries through ATMs. p. 10

2/05 **The freedom Bank of America gives its Hong Kong unit** to develop its own software products is paying off. p. 2

2/10 **A research firm says poor distribution,** pricing, product quality, and marketing have kept video banking from growing. p. 11

2/11 **Hogan Systems Inc. has started delivering** a fully rewritten Integrated Loans Processing System. p. 6

2/11 **Broadway & Seymour Inc. has agreed to market** the Bancstar and Bancstar 4700 branch platform automation packages. p. 6

2/11 **ATM pioneer Jack Chang is on the scene again** with a new, low-cost branch automation system. p. 8

2/13 **The design of a nationwide point-of-sale payment system** that can be operating by yearend has been completed. p. 2

2/18 **Australia plans to launch a national electronic point-of-sale service** next October encompassing up to 150,000 terminals. p. 10

2/18 **TRW Inc. is offering on-line credit reports** to consumers for $35 via a Comp-U-Card International Inc. deal. p. 10

2/18 **Union Bank of Switzerland is installing** US Trust Unit's software system. p. 10

2/19 **J.C. Penney Co. will launch a cable television home-shopping service** in June and has set $40 million aside for the project. p. 3

2/25 **Growth in point-of-sale payment terminals** is on the verge of exploding, a study says. p. 11

2/25 **Techniques of collecting on delinquent loans haven't kept pace** with the rise in consumer debt, a systems vendor says. p. 12

2/25 **A former banker thinks** the J.C. Penney Co. home shopping network he runs will eventually drive customers to banks. p. 3p.

2/25 **UAI Technology Inc. has crossed over** into personal financial planning with the acquisition of Leonard Financial Planning Systems. p. 13

2/25 **VideoFinancial Services' new owner is breathing some life** into the video banking promoter. p. 14

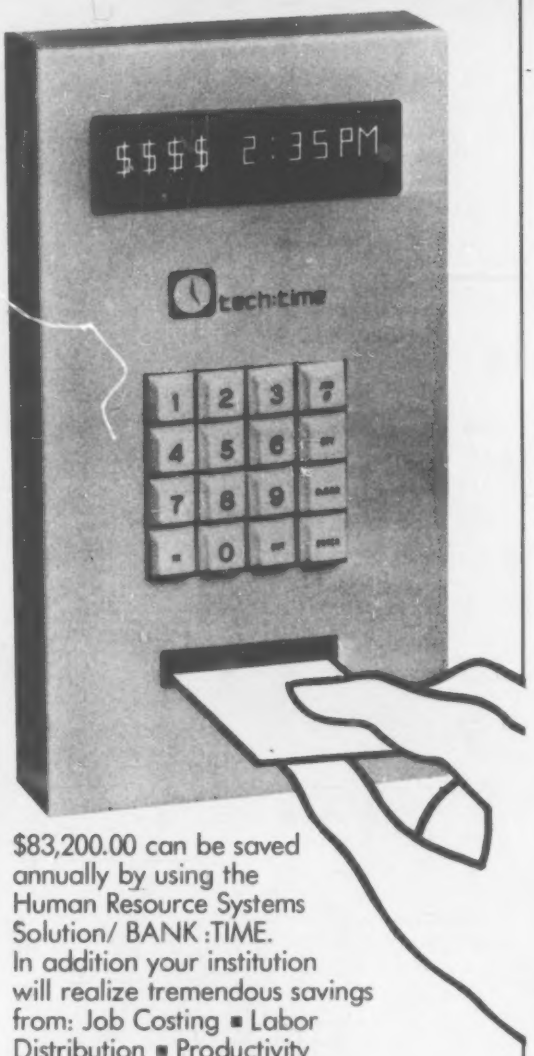
2/25 **Littlewood, Shain & Co. has made** two of its payments management systems compatible with Burroughs Corp. equipment. p. 15

Continued on page 84

IF YOU AGREE THAT...

'TIME IS MONEY'

...YOU WILL CALL ABOUT BANK:TIME



- $83,200/Year Savings on $40,000/Week payroll
- Compliance to Regulations
- Productivity Improvement
- Job Costing
- Integrate with other Systems
- Security Access
- Custom Interface to your Payroll System
- Year-To-Date Employee Data

$83,200.00 can be saved annually by using the Human Resource Systems Solution/ BANK:TIME. In addition your institution will realize tremendous savings from: Job Costing ■ Labor Distribution ■ Productivity Improvement ■ Security ■ Integration With Existing Computers and Systems ■ Detailed Management Information, so necessary to facilitate timely management decisions.

tech:time
A NASDAQ COMPANY
1800 Second Street, Suite 970
Sarasota, Florida 34236

For more information call:
Peter Allen, Vice President of Financial Systems.

1-800-331-TIME
(Florida Only)

1-800-648-TIME

2/27 **For the second year in a row,** Swift has had to announce postponement of its second-phase expanded communications system. p. 2

MARCH

3/4 **Reuters Information Services Inc. will develop** an electronic market-access system for commercial real estate. p. 1

3/4 **Charles Schwab & Co. is offering** its on-line brokerage customers a modem with its Equalizer software package via direct mail for $199. p. 8

3/4 **The Federal Reserve Bank of Minneapolis has begun truncating** a Michigan bank's retail checks. p. 8

3/11 **Merchants in 25 states agreed** to use a credit card authorization network supplied by J.C. Penney Systems Services Inc. p. 8

3/11 **Merchants in 25 states agreed** to use a credit card authorization network supplied by J.C. Penney Systems Services Inc. p. 8

3/11 **Interact Technology has devised a system** that delivers bill-paying and banking services via the telephone. p. 8.

3/11 **The progress of electronic funds transfer systems will be hindered** as long as the financial services industry disagrees on certain standards. p. 8.

3/11 **Smart Cards are being delivered** by Multimil Inc., they have a storage capacity of 8,000 characters. p. 10

3/13 **Hogan Systems said it has a new version** of its integrated loan processing system that enhances the software for mortgage banking. p. 6

3/18 **Security Pacific Automation Co. is selling** all its software through national distributors. p. 7

3/23 **Two firms announced** quote service contracts with Merrill Lynch, Pierce, Fenner & Smith Inc. p. 2

3/25 **More than 300,000 French consumers now do their banking remotely** using a Minitel terminal. p. 21

3/26 **Unisys Corp. announced two upgraded models** in its computers used mostly by banks and other financial institutions. p. 3

3/30 **Marine Midland Bank has started** another video banking pilot. p. 3

3/31 **Citicorp has agreed to sell the Quadstar Corp.,** a software company it acquired in 1984, to the MTech Corp. p. 3

APRIL

4/1 **Citibank is touting** its new automated teller machine as a breakthrough in "cognitive ergonomics." p. 8

4/1 **Ericsson Financial Systems is offering** its branch automation package to a wider market. p. 10

4/1 **Merchant Network of Chicago introduced "Bill,"** a service much like the telephone bill-paying programs of the early 1980s. p. 11

4/1 **Purchasers of Treasury Bills have begun receiving account statements** in place of engraved certificates. p. 12

4/7 **Uccel Corp. has run into delays** in developing integrated loans application software for banks. p. 2

4/8 **Bankers are greeting** IBM's new generation of personal computers with tempered enthusiasm. p. 8

4/8 **The Electronic Funds Transfer Association wants** to take marketing matters into its own hands. p. 9

4/9 **For a change, technology came under criticism** at a meeting of the European Financial Management and Marketing Association. p. 2

4/14 **The videotex trade group is working to lift the ban** on offering information services that was imposed on telephone companies after the breakup of AT&T. p. 9

4/15 **Credit Unions are turning to automation services** to become their members' primary financial institutions. p. 14

4/15 **Britain's Midland Bank has signed final agreements** with Dallas-based Hogan Systems Inc. for software to support electronic retail banking. p. 16

4/15 **Fiserv Inc. purchased the savings and loan customer base** of Midwest Commerce Data Corp., a data processing unit of Midwest Commerce Corp. p. 17

4/22 **Kirchman Corp. signed an agreement to market** community bank systems jointly with International Business Machines Corp. p. 3

4/22 **The microcomputer revolution is spreading** to the balance reporting area. p. 8

4/28 **Euromarket dealers are worried** that a proposed directive by the Economic Community will increase the time and cost of selling securities. p. 2

4/28 **VideoFinancial Services has adopted an official new name** for itself — AMR/VFS. p. 2

4/29 **The market for software and services** that support electronic data interchange is likely to double this year. p. 8

4/29 **A hybrid check-filing system helped ease** the transition to automation at Goldome. p. 10

4/29 **A telex-to-computer link aids MasterCard authorizations** for smaller clients in remote parts of the world. p. 11

MAY

5/4 **Star System Inc.,** the largest ATM network in the western states, is entering the point-of-sale debit business under a new name — Explore. p. 10

5/4 **Perpetual Savings Bank plans to develop a network** of ATM machines for supermarkets and convenience stores in the Middle Atlantic region. p. 10

5/6 **Chase Manhattan Bank plans** to dissolve the 18-employee advanced product research division at the end of May. p. 3

5/6 **Sheshunoff & Co. is making available its performance statistics** on compact disk read-only memory, an advanced computer storage medium. p. 8

5/6 **A videotex partnership** of International Business Machines Corp. and Sears, Roebuck and Co. will debut in Hartford, Conn. in 1988. p. 8

5/8 **Hogan Systems acquired GDK Systems,** which markets an international money management system. p. 2

5/13 **Cost pressures, changing lifestryles, and competition** will force depository institutions to redesign branch networks, according to a study. p. 8

5/13 **John Diebold & Associates reports** that many financial institutions lack a true technology strategy necessary to remain competitive. p. 8

5/13 **MTech Corp. reached a definitive agreement to acquire Kalvar Corp.,** a Minneapolis-based provider of microfilm services. p. 11

5/13 **First Wachovia Corp. and Wells Fargo Bank agreed** to license an expert system that helps bank officers evaluate commercial credits. p. 12.

5/13 **A glossary of technology topics** could be found on p. 14.

5/19 **The Communications firm of McDonnell Douglas Payment Systems Co. ended** its agreement to support MasterCard's POS terminal network. p. 6

5/20 **Trintex will charge only a flat monthly fee** for the videotex service it will launch next year. p. 6

5/20 **Productivity in check-processing departments held steady** in 1986 but lagged behind that of 1984. p. 10

5/20 **Lower interest rates may be behind**

Continued on page 86

IN TODAY'S BANKING BATTLES, YOU NEED A STRATEGIC WEAPON.

To win the battle for marketshare, it takes quick action with the right financial products. But the traditional system may not be the weapon. For today, you need a solution that meets today's selling challenges, yet still has the flexibility to execute your long-range strategies.

That's why more and more banks are choosing Bunker Ramo's ALADDIN® system. Because Aladdin adapts to your needs, year after year. Here's how.

Open Systems Architecture

- The Aladdin system is based on industry-standards like UNIX™ and MS-DOS.® This gives you the flexibility to address future requirements that are still being defined... but without starting all over.

Ultimate Application Flexibility

- Aladdin gives you not only our proven branch applications, BANKTRAN®-PLUS and ADTRAN™, but the flexibility to add virtually any PC application...
- And Aladdin's unique transaction generator allows non-programmers to add or modify products in a flash.

Our customers can tell you about Aladdin's proven performance and flexibility. Higher sales and cross sales have been achieved. Operating costs are down, while Aladdin's flexible applications are actually providing more information, more choices, and better customer service.

For the ultimate proof of Aladdin's power, talk to our customers. We'll get you in touch.

So, before you commit to the wrong ally, call **203-337-1234.**

★★★★

BUNKER RAMO

An Olivetti Company

THE MOST POWERFUL ALLY A BANK CAN HAVE.

2 ENTERPRISE DRIVE, SHELTON, CONNECTICUT 06484

slower check clearing times. p. 10

5/20 **Banks should not skimp on advanced communications networks,** says a technology consultant. p. 11

5/20 **Smartcard International and two Houston institutions are testing** the new UltiCard as a medical information system. p. 12

5/27 **Citicorp is using the Ingres data base management program** to form the "engine" of its home-grown management reporting system . p. 8

5/27 **Community banks want loan pricing** more than any other automated service that is not available from service bureaus, a consultant says. p. 11

5/27 **Two upstate New York banks plan to charge customers** in selected areas a 75 cent fee for using ATMs at other banks. p. 13

5/28 **With the introduction of its stock quotation service** in the U.S., Reuters plunges into competition with Quotron Systems Inc. and Automatic Data Processing Inc. p. 5

5/29 **The switchover** to a direct-deposit, book-entry system is falling into place at the Philadelphia Fed. p. 13

JUNE

6/1 **The rest of the banking industry may never be able to catch up** to the few large banks that have become dominant in their acquisition and use of technology. p. 1

6/1 **Retailers are optimistic** about point-of-sale services and technology, which they believe are on the verge of significant growth: Technology Review. p. 15

6/2 **Computer Associates International Inc. and Uccel Corp. will merge** to form the biggest independent vendor of software. p. 1

6/2 **Tandem computers announced a joint marketing deal** with Systeme Corp. that aims to widen branch automation services. p. 5

6/2 **Midland Bank PLC will test smart card technology** during the 1987-88 academic year at Loughborough University of Technology in England. p. 8

6/3 **Diebold Inc.'s absence** from an exhibit at a technology conference sparked doubts about the ATM manufacturer's financial health. p. 2

6/3 **Computer Associates International Inc. said Uccel Corp. will remain in Dallas** as a fully integrated division after the two firms merge. p. 2

6/3 **The banking industry is finding it impossible** to hold the line on automation costs, the ABA says. p. 8

6/4 **Four major U.S. banks have allied themselves** with nonbanking partners to bring their bid for securities units in Japan to fruition. p. 1

6/4 **Attendance was up** at the American Bankers Association's national operations and automation conference. p. 2

6/9 **Eight banks and thrifts** in Pennsylvania, New Jersey, and Delaware began signing up subscribers for home video banking. p. 2

6/10 **Vendors rolled out the latest technology** at the ABA operations and automation conference. p. 8

6/10 **The nation's major banks continue to migrate** away from large mainframe computers to small computers. p. 9

6/10 **Telerate sees banks as major prospects** for Tactician, the on-line Treasury securities analysis system it introduced this week. p. 10

6/11 **Uccel Corp. postponed until late 1988** any commercial deliveries of its Infoloans banking software system. p. 6

6/17 **BKW Systems,** a software company operating under Chapter 11 protection, is working to fulfill existing contracts for its Pulse banking systems. p. 13

6/17 **A French bank has installed** France's first automated currency exchange machine. p. 27

6/22 **Twelve major banks are banding together** to explore electronic data interchange, a system for paperless communication. p. 1

6/24 **People remain the biggest concern in banks' continuing struggle against fraud,** but computers are increasingly being used as accessories. p. 7

6/24 **Technobank, one of the biggest exhibitions** of banking technology, appears to be designed less for bankers than for equipment and service suppliers. p. 8

6/24 **Chillicothe Telephone Co. of Ohio has just added banking** to its two-year-old homegrown videotex service. p. 10

6/25 **IBM has launched a software marketing program** that is unprecedented in the banking filed. p. 19

JULY

7/1 **Ninety-one percent of financial services industry heads** say they prefer IBM computer equipment over all others. p. 10

7/1 **A Minneosota public aid agency began its long-awaited test** of distributing welfare payments through electronic funds transfer terminals. p. 10

7/1 **Peat, Marwick, Mitchell & Co. is using an artificial intelligence product** to help banking clients evaluate commercial loans. p. 11

7/1 **Ninety-one percent of financial services industry heads** say they prefer IBM computer equipment over all others. p. 10

7/1 **A Minneosota public aid agency began its long-awaited test** of distributing welfare payments through electronic funds transfer terminals. p. 10

7/1 **Peat, Marwick, Mitchell & Co. is using an artificial intelligence product** to help banking clients evaluate commercial loans. p. 11

7/3 **MTech Corp. and UCCEL Corp. will provide remote data processing** services to National Bancshares Corporation of Texas. p. 9

7/7 **Merrill Lynch and Manufacturers Hanover have linked computer systems** to make it easier for corporations to issue U.S.-denominated commercial paper. p. 6

7/7 **Canadian bankers recently discussed what would be unthinkable** in the U.S.: sharing back-office data processing systems. p. 12

7/8 **A variety of bank equipment vendors joined forces** when Inter Innovation AB of Stockholm acquired LeFebure Corp. of Cedar Rapids, Iowa. p. 10

7/8 **Twenty-two banks and thrifts have been signed** by American Management Systems as new applications software clients so far this year. p. 13

7/9 **A new poll says** financial institutions tend to be confused about technology strategies. p. 12

7/10 **Federal regulators have selected Compuserve** to start a pilot program to speed up bank call reports through electronic transmission. p. 1

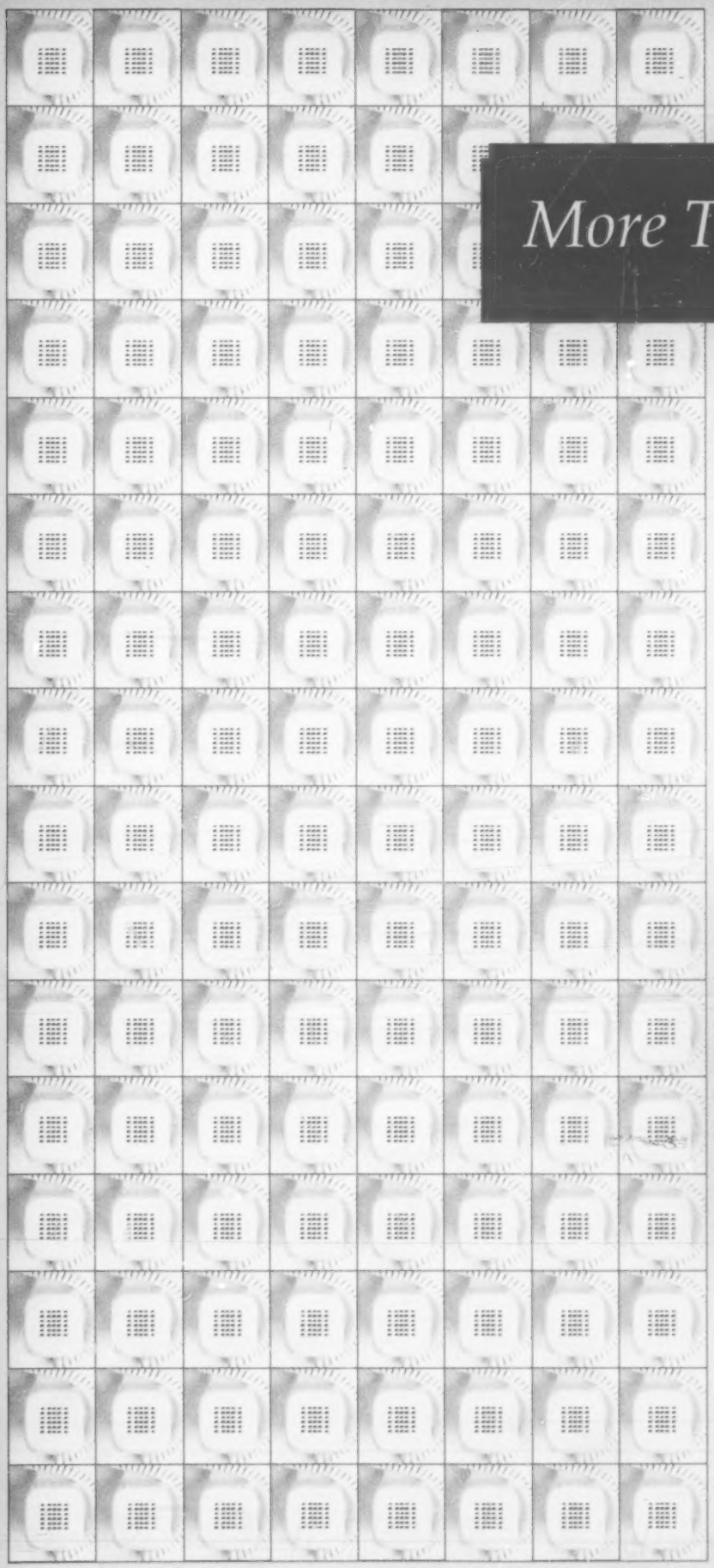
7/10 **Citicorp is dropping Bunker Ramo as a supplier of stock quotes** for its Global Report and is relying on its Quotron unit instead. p. 20

7/15 **First Jersey National Corp. is overhauling its back-office** operation to enhance front-office and marketing efforts. p. 8

7/15 **Systematics Inc. has licensed its data processing software** to Indonesia's largest bank and will provide installation and support services. p. 8

7/15 **American Express is nearing a de-**

Continued on page 88



Racal's New Voice Logging Recorder

More Truth...

With up to 128 duplicated channels available, the new ICR 64 performs like no other. Thanks to microprocessor control and modular design, the ICR 64 offers the user up to 256 channels (or 128 channels with back up) of recording capacity in a single upright cabinet. That's over 50% more channel capacity than the nearest competitor.

LESS SPACE To put it another way, when floor space is a premium, this increased channel capacity allows you to put 128 channels with back up in the same space as competitive models with 80 channels or less. A real savings when every square foot counts and costs!

EASY TO FIND Racal's exclusive "Activity Search" feature allows you to easily find activities even when the time they occurred is not known. No more endless searches to waste your time.

YOU CONTROL SYSTEM ACCESS And not just anyone has it. Thanks to Racal's multi-level security system, you decide "who" has access to "what".

EXPERIENCE COUNTS

The ICR 64 is the result of 40 years experience in the design and development of voice recorders. 40 years in which Racal has installed more than 10,000 communications recorders in over 140 countries worldwide.

256 Channel 4 Deck System *128 Channel Dual Deck System*

WHEN THE COMMUNICATION COUNTS, COUNT ON RACAL

RACAL

Racal Recorders, Inc.
4 Goodyear Street
Irvine, CA 92718 USA
Telephone (714) 380-0900
Outside Calif. Toll Free (800) 847-1226

cision for a supplier of point-of-sale terminals. p. 9

7/16 BankAmerica's MasterNet computer system, which was supposed to become a premier piece of banking technology, has embarrassed the company. p. 1

7/20 Automated teller machine networks await the outcome of a lawsuit that charges a local network with price-fixing and trying to create a monopoly. p. 1

7/22 Chase Manhattan Bank plans to add a video banking service that subscribers can access from any computer with a modem. p. 5

7/22 Diebold Inc. missed this year's ABA operations and automation convention because of a revised marketing strategy. p. 5

7/22 The Navy will equip as many as 118 ships with automated teller machines and point-of-sale terminals by the end of the year. p. 6

7/29 Banking software companies have mixed reactions to IBM's announcement that it is directly entering the applications software business. p. 6

7/29 Interstate Technologies is installing electronic terminals that supermarket customers can use to validate checks before the checkout counter. p. 6

7/29 Marshall & Ilsley Corp. will acquire a software company in Florida and sell mortgage software directly. p. 8

AUGUST

8/12 Deals for software companies are on the rise as mergers decline overall. p. 6

8/12 A 12-digit code that can help securities traders transcend language barriers and facilitate trading is gaining acceptance. p. 6

8/17 Favorable reaction to increased loan-loss reserves helped drive up the market value of the nation's largest banks in the second quarter. p. 1

8/19 US. Bank is testing a technology that experts say will revolutionize the way information flows through telephone lines. p. 8

8/19 Citizens and Southern Corp. has purchased Forte, a wholesale electronic service delivery package. p. 8

8/19 Treasury workstations have been overdeveloped and oversold, writes Sam C. Vohra. p. 10

8/19 The operations-oriented National Automated Clearing House Association said it plans to hire an ad agency to help promote direct payment services to consumers. p. 11

8/26 Bankers Trust Co. is gearing up to become the premier provider of wholesale lockbox services in the Northeast. p. 8

8/26 The International Standards Organization has taken steps to prepare for an anticipated explosion of smart cards. p. 8

8/26 American Express will test point-of-sale terminals from an Australian firm, rejecting bids from six domestic companies. p. 10

SEPTEMBER

9/2 Citicorp's recent entry into the consumer money transfer business has put the spotlight on it chosen vendor, FundsNet Inc. p. 6

9/2 Internet is officially entering the point-of-sale business. p. 6

9/2 Sheshunoff & Co. has released its quarterly ratings of savings and loan associations for the first time in compact disk read-only memory. p. 8

9/2 The NewTrend Group has released a analysis system for bank profitability that allows data from Unisys mainframes to be analyzed on IBM personal computers or compatibles. p. 11

9/4 MasterCard's agreement to purchase Cirrus Systems Inc. could spur more growth in the debit card and point-of-sale industries. p. 1

9/8 Hogan Systems Inc. will report a loss of between $2.5 million and $3 million in the fiscal quarter ending Sept. 30. p. 3

9/9 Omron Financial Systems is concentrating on product development and replacement of competitors' machines in order to challenge Diebold. p. 6

9/9 Electronic Data Systems was the most popular institutional issue among publicly traded stocks of bank software and service companies in the second quarter. p. 8

9/9 Unisys Corp. introduced three smallframe computers that are the size of washing machines but pack the power of mainframes. p. 7

9/15 The C&S National Bank is promoting the use of high-tech teller machines. p. 11

9/16 An account analysis standard has been completed by the National Corporate Cash Management Association. p. 8

9/16 National Bancard Corp., a credit card processor, will soon become a wholly owned unit of the First Financial Management Corp., Atlanta. p. 8

9/16 The Swift seminar on international operations in Montreal was upbeat despite news of further delays in system expansion. p. 10

9/16 Data Architects Inc. is marketing a software package that uses artificial intelligence to direct money transfers to their proper recipients. p. 15

9/23 Visa released research that it commissioned showing most bankers downplay smart card technology. p. 1

9/23 France's national videotex service has placed coin-activated terminals in public places. p. 8

9/23 First National Bank of Chicago has signed on as the first financial services company to offer its products through Telaction Corp., J.C. Penney Co.'s videotex subsidiary. p. 8

9/23 Key Bank USA is the first bank to join Prodigy, a videotex service by Trintex — a joint venture of Sears, Roebuck and Co. and IBM. p. 14

9/30 Three major banks have made at least a preliminary commitment to the proposed loan-pooling operations of Dimensional Corporate Finance Inc. p. 2

OCTOBER

10/2 Manufacturers Hanover Trust Co. unveiled an account that features computer-generated pie charts on statements. p. 2

10/2 A major earthquake east of Los Angeles closed numerous offices and affected operations at several financial institutions, particularly those with data processing facilities. p. 2

10/5 Significant troubles continue to plague MasterNet, BankAmerica Corp.'s $20 million computerized trust accounting and reporting system. p. 2

10/6 The ABA urged bank marketers to volunteer for its lobbying effort and displayed a computerized program to help. p. 9

10/7 NCNB National Bank, Charlotte, N.C., will drop its two-year-old home banking effort at the end of this month. p. 18

10/7 NCR Corp.'s latest offering to the branch automation marketplace is the Financial Tower System 2. p. 10

10/7 Product managers are hindered from performing their jobs because of a lack of definitive data on the cash management marketplace, says a Chicago consultant. p. 10

10/7 Two companies have introduced new products that makes news in the point-of-sale industry. p. 11

Dear Reader, How Are We Doing?

The American Banker hopes you find value in our first technology survey and that the information it provides will be of use to you in your work. To help us do a better job in preparing future technology surveys, would you please take a minute to offer us some feedback on this one? Please return this questionnaire to William Zimmerman, Editor, American Banker, One State Street Plaza, New York, NY 10004, (212) 943-5712. Many thanks.

1. Overall, how informative is the 1987 American Banker Technology Survey?

☐ Very informative ☐ Not very informative
☐ Somewhat informative ☐ Not at all informative

2. How useful is this survey to you?

☐ Very useful ☐ Not very useful
☐ Somewhat useful ☐ Not at all useful

3. How will you use the information from this survey at work?

_____

_____

4. What do you LIKE MOST about this survey?

_____

_____

5. What do you LIKE LEAST about this survey?

_____

_____

6. The 1987 technology survey covers a wide range of subjects. How important is it that you learn about the following subjects? Please rank the extent of your interest as follows: 3 = Extremely important, 2 = Fairly important, 1 = not important.

___ Personnel issues
___ Salary issues
___ Turnover rate
___ Compensation
___ Recruiting
___ Expenditures on operations and technology
___ Numbers of technology personnel
___ Information on research and development
___ Data processing budget figures
___ Your evaluation of computer systems
___ Performance of your primary computer systems
___ After-sale support provided by vendor
___ Your evaluation of software products' quality
___ Your evaluation of sales representatives of various hardware and software vendors
___ Future technologies

7. Which subjects or issues that are not in the 1987 technology survey would you like covered in a future technology survey? Please list as many as you want.

_____

_____

8. How useful to you are the following segments of this survey? Please rank as follows: 1 = Very useful, 2 = Fairly useful, 3 = Not useful.

___ The People
___ The Systems
___ The Future

9. How would you change the survey to make it more useful? (a) Please check one from each set.

☐ Very useful
☐ Not very useful

☐ More subjects in less depth
☐ Fewer subjects, but more in-depth

☐ More numbers, less analysis
☐ Fewer numbers, more analysis

☐ More charts, tables, graphics
☐ Fewer charts, tables, graphics

☐ More quotes from bankers
☐ Fewer quotes from bankers

(b) Please list any other changes you suggest to improve our survey.

_____

_____

To help us to better understand responses, please fill in the following information:

Name (optional) .....

Title .....

Company .....

Address .....

City ..... **State** ..... **Zip Code** .....

P.S. Thanks again very much for your help. If you would be willing to discuss your views about the survey with us, would you list your telephone number so that we might contact you?

Phone number .....

"On a scale of 1 to 10, I would give you a 9."

Andy Anderson, Senior Vice President
Briercroft Savings Association, Lubbock, Texas

You can judge a data processing company by its conversion.

Let's face it, converting from one data processing system to another is not often fun. Conversion horror stories abound in the thrift industry. System downtime, missed deadlines, customer complaints—the probabilities of a major glitch during conversion are enormous.

That's why Andy Anderson of Briercroft Savings was so impressed with First Financial Management Corporation (FFMC). The conversion to FFMC's on-line, real-time system, complete with modular mini and micro/personal computer terminals, was completed as scheduled. And the process was so smooth, so painless, that Briercroft's customers never knew it happened.

The Thrift Services Division of FFMC has been doing conversions like this for some time. It was originally founded in 1969 and today, it provides comprehensive transaction and account data processing to over 150 thrift institutions nationwide.

FFMC's system uptime, terminal response time, reliability, and customer support are so superior to industry norms, that it has even taken the pain out of the conversion process.

For more information, please contact Dianne Yost at (303) 771-9000.

FFMC

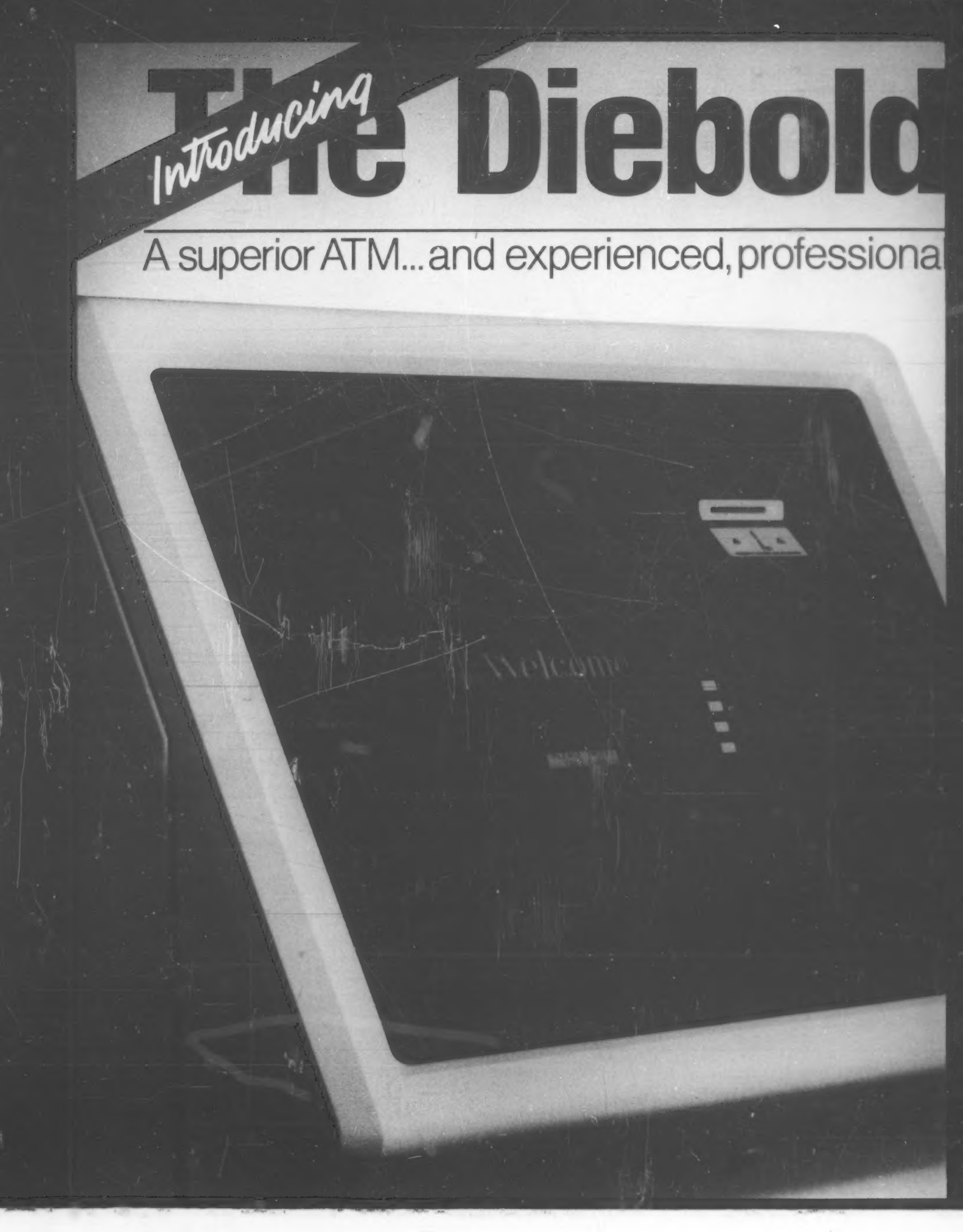
THRIFT SERVICES DIVISION
First Financial Management Corporation

14 Denver Technological Ctr.
5850 DTC Parkway
Englewood, Colorado 80111
(303) 771-9000

Introducing

The Diebold

A superior ATM... and experienced, professiona



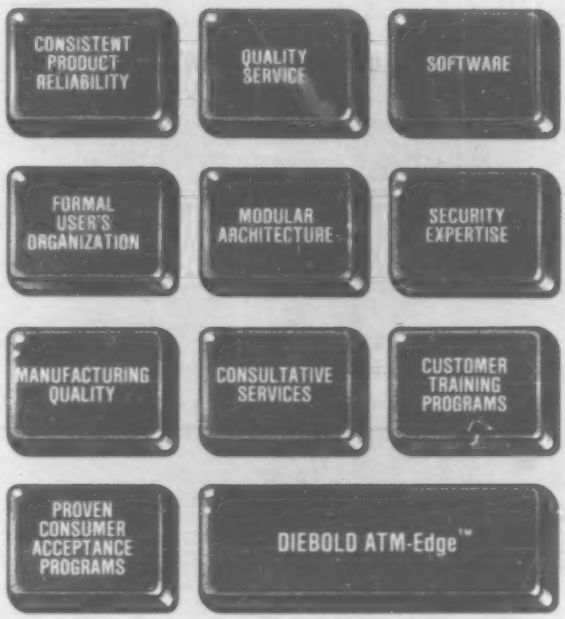
ATM-Edge.™

support give you the competitive edge.

The success of your ATM program depends first on a superior performing ATM. Then, add the Diebold ATM-Edge, an exclusive program of extended benefits from Diebold, and the result is superior ATM program performance and success.

Don't listen to vendor promises. Rely on ATM market performance facts. By the end of its first year:

- *More Diebold 1000 Modular Delivery System ATMs were shipped than any other ATM previously introduced.*
- *The Diebold 1000 Modular Delivery System far exceeded product reliability goals.*
- *Diebold 1000 Modular Delivery System ATMs achieved higher consumer acceptance than any other ATM ever introduced. With an average 6,000 transactions per month, Diebold outperforms industry averages by 20%.*
- *Diebold 1000 Modular Delivery System ATMs have replaced over 1,000 previous generation ATMs.*



Now, add the Diebold ATM-Edge, a program of benefits that gives you lower life cycle costs and higher consumer acceptance. Consider, too, these added advantages:

- *Maintenance packages tailored to suit your operational needs.*
- *Trade-in programs to upgrade your delivery system, lower maintenance costs and increase your profitability.*
- *Software packages to reduce and control networking costs and operations. More standard software packages than most ATM software companies.*
- *Programs to increase customer usage beyond the 35% barrier.*
- *Protected investment due to high residual ATM value.*

Diebold continues to lead ATM success and performance standards for the industry. For more information on gaining the competitive edge, call your local Diebold office or write Diebold, Incorporated, P.O. Box 8230, Dept. 9-79, Canton, Ohio 44711.

DIEBOLD®

We deliver success.

INTRODUCING THE ACCOUNT PROCESSING SYSTEM YOU CAN BUILD YOUR FUTURE ON

u f s

The universal financial system (ufs) from NCR

Now there is a financial software system truly designed to let you respond quickly to the change that is so inherent in your business today.

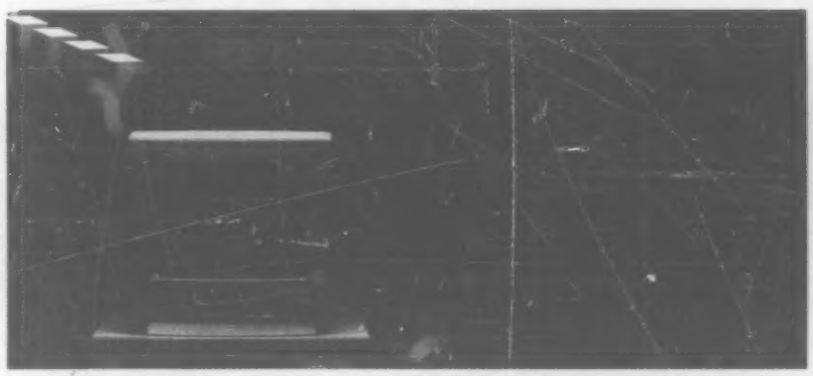
Created for medium to large institutions, *ufs* combines your Customer, Deposit and Loan applications into a totally integrated multi-institution, multi-branch framework. Together, they are supported by self contained elements or instruction sets which can work in concert to produce virtually any financial function required.

Since *ufs* is a management oriented system, it allows you to easily perform quick, on-line retrieval and analysis of up to the minute information on each customer's relationship with your institution.

And, *ufs* gives you the flexibility you need to keep up with change ... through the power of ESP.

Element Structured Programming (ESP)

This revolutionary concept is really a new generation financial



language based on the separation and categorization of financial functions into discreet processing elements.

ESP's unique approach breaks away from traditional cryptic coding. Instead, pre-coded elements of standard COBOL are essentially building blocks readily assembled for financial account processing.

The use of these building blocks is easily accomplished since they are all described in plain English.

This drastically reduces the need for time consuming programming. Now, using ESP, financial products can be altered quickly to adapt to a changing market, with new products designed by simply following lead through menus on a personal computer.

A dynamic system... for your dynamic future

The innovative architecture of *ufs*, with ESP, creates the optimum program path for every transaction. In effect, programming is dynamically created to fit each specific product. And new product development time is drastically reduced, which can let you lead the market with new financial offerings.

ufs is, indeed, the system to build your future on. For more information on the many benefits of *ufs*, phone 1-800-CALL NCR today.

NCR

© 1987 NCR Corporation

A FOUNDATION FINANCIAL INSTITUTIONS CAN BUILD ON.